DSR-40/40P

SERVICE MANUAL

US Model
Canadian Model
DSR-40
AEP Model
DSR-40P

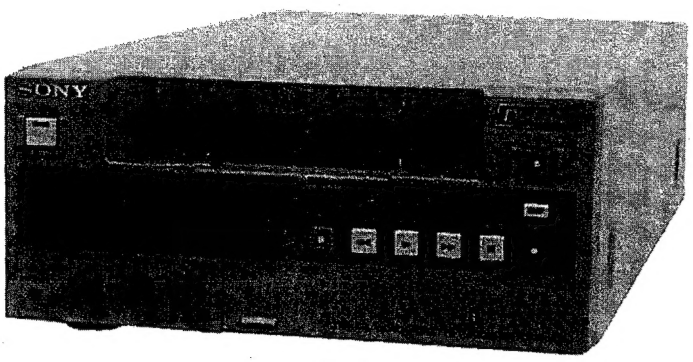


Photo: DSR-40

SPECIFICATIONS

System

Recording format: DVCAM format, rotating 2-head helical scan, digital component recording

Video signal
- DSR-40: EIA STANDARD, NTSC color system
- DSR-40P: CCIR STANDARD, PAL colour system

Video

Quantification: 8-bit

Standardization frequency
- DSR-40: 13.5 MHz (4:1:1 Component)
- DSR-40P: 13.5 MHz (4:2:0 Component)

Audio

Quantification: 12-bit (non-linear) or 16-bit (linear)

Standardization frequency: 32 kHz (12-bit recording) or 48 kHz (16-bit recording)

Usable cassettes: Standard-DVCAM cassettes and Mini-DVCAM cassettes

Recording time: 184 minutes (when using the PDV-184ME cassette)
40 minutes (when using the PDVM-40ME cassette)

Clock

Quartz locked
- DSR-40: 12-hour cycle display
- DSR-40P: 24-hour cycle display

Power back-up: Built-in self-charging capacitor
Back-up duration: up to 100 hours (After 8 hour charges)

Inputs and outputs

INPUT
- S VIDEO: Mini DIN 4-pin
  Luminance signal: 1 Vp-p (75 ohms unbalanced)
  Chrominance signal: 0.286 Vp-p (DSR-40) 0.3 Vp-p (DSR-40P) (75 ohms unbalanced)
- VIDEO: BNC type
  Input signal: 1 Vp-p (75 ohms unbalanced)
- AUDIO: Phono jack (L, R)
  Input level: 2 Vrms (full bit)
  Input impedance: more than 47 kohms

MONITOR
- VIDEO: BNC type
  Output signal: 1 Vp-p (75 ohms unbalanced)
- AUDIO CH1/3: Phono jack
  Output level: 2 Vrms (full bit)
  Output impedance: less than 10 kohms
- AUDIO CH2/4: Phono jack
  Output level: 2 Vrms (full bit)
  Output impedance: less than 10 kohms

– Continued on next page –

DVCAM™ DIGITAL VIDEO CASSETTE RECORDER

MICROFILM

SONY®

DSR-40/40P

SONY

SERVICE MANUAL

US Model
Canadian Model
DSR-40
AEP Model
DSR-40P

CORRECTION-1

File this correction with the service manual
(99-012)

CORRECTION OF ELECTRICAL PARTS LIST

6-2. ELECTRICAL PARTS LIST

(See Service Manual Page 6-31)

Page	INCORRECT				CORRECT			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
6-31	⚠	1-468-377-11	POWER BLOCK (U-2) (DSR-40)		⚠	1-468-377-11	POWER BLOCK (U-2) (DSR-40)	
	⚠	1-468-378-11	POWER BLOCK (U-2) (DSR-40P)		⚠	1-468-378-11	POWER BLOCK (U-2) (DSR-40P)	
	C3	9-880-339-01	FILM 0.047μF		C3	9-880-399-01	FILM 0.047μF	
	C14	9-880-339-01	FILM 0.047μF		C14	9-880-399-01	FILM 0.047μF	
	C15	9-880-339-01	FILM 0.047μF		C15	9-880-399-01	FILM 0.047μF	
	C16	9-880-339-01	FILM 0.047μF		C16	9-880-399-01	FILM 0.047μF	
	C17	9-880-339-01	FILM 0.047μF		C17	9-880-399-01	FILM 0.047μF	
	C22	9-880-339-01	FILM 0.047μF		C22	9-880-399-01	FILM 0.047μF	
	C23	9-880-339-01	FILM 0.047μF		C23	9-880-399-01	FILM 0.047μF	
	C24	9-880-339-01	FILM 0.047μF		C24	9-880-399-01	FILM 0.047μF	
	C25	9-880-339-01	FILM 0.047μF		C25	9-880-399-01	FILM 0.047μF	
	C27	9-880-339-01	FILM 0.047μF		C27	9-880-399-01	FILM 0.047μF	
	C41	9-880-339-01	FILM 0.047μF		C41	9-880-399-01	FILM 0.047μF	
	C42	9-880-339-01	FILM 0.047μF		C42	9-880-399-01	FILM 0.047μF	
	C43	9-880-339-01	FILM 0.047μF		C43	9-880-399-01	FILM 0.047μF	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

99G0511-1

Sony Corporation
Personal VIDEO Products Company

9-974-133-91

Published by Safety & Service Engineering Dept.

OUTPUT
S VIDEO: Mini DIN 4-pin
Luminance signal: 1 Vp-p (75 ohms unbalanced)
Chrominance signal:
0.286 Vp-p (DSR-40)
0.3 Vp-p (DSR-40P)
(75 ohms unbalanced)
VIDEO: BNC type
1 Vp-p (75 ohms unbalanced)
Y: BNC type
1 Vp-p (75 ohms unbalanced)
R–Y: BNC type
0.7 Vp-p (75 ohms unbalanced)
(DSR-40: 75%, color bar / DSR-40P: 100%, color bar)
B–Y: BNC type
0.7 Vp-p (75 ohms unbalanced)
(DSR-40: 75%, color bar / DSR-40P: 100%, color bar)
AUDIO CH1/3: XLR 3-pin, male, +4 dBu, 600 ohms loading, balanced.
AUDIO CH2/4: XLR 3-pin, male, +4 dBu, 600 ohms loading, balanced.

REF.VIDEO INPUT
BNC type
1 Vp-p (75 ohms unbalanced)

CONTROL S Minijack

DV 4-pin jack (i.LINK)

REMOTE D-sub 9-pin

PHONES Stereo minijack
–2 dBu, 8 ohms, unbalanced (when volume is set to maximum)

General

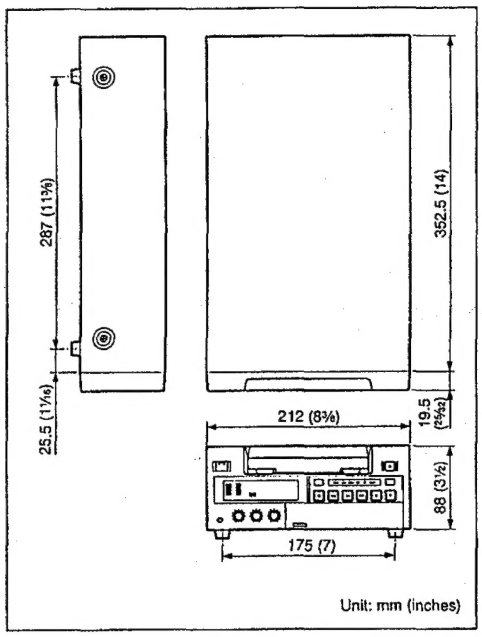
Power requirements
DSR-40: 120 V AC, 60 Hz
DSR-40P: 220 – 240 V AC, 50 Hz

Power consumption
DSR-40: 40 W, 120 V AC, 60 Hz
DSR-40P: 40 W, 220 – 240 V AC, 50 Hz
(during playback)

Operating temperature
5°C to 40°C (41°F to 104°F)

Storage temperature
–20°C to +60°C (–4°F to +140°F)

Dimensions Approx. 212 × 98 × 392 mm (8 3/8 × 3 7/8 × 15 1/2 inches)
(w/h/d, including projecting parts and controls)



Mass Approx. 5 kg (11 lb.)

Supplied accessories
AC power cord (1)
Cleaning cassette (1)

Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
6. Check the B+ voltage to see it is at the values specified.
7. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

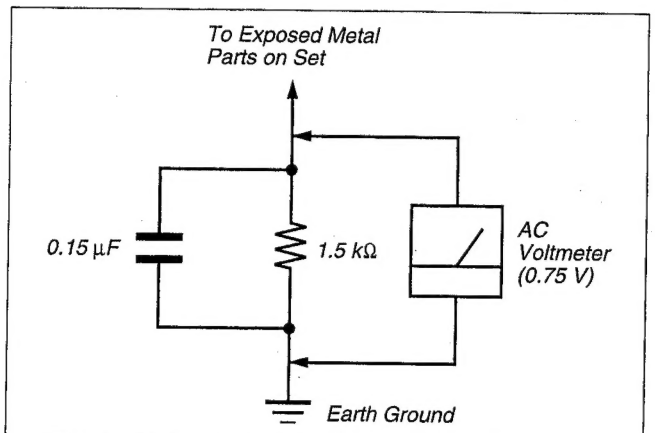
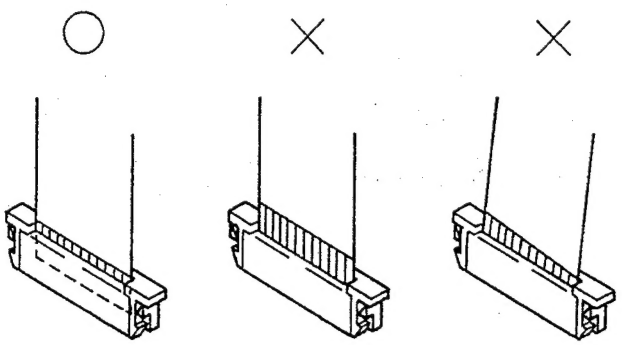


Fig. A Using AC voltmeter to check AC leakage

SERVICE NOTE

• Note for Repair

Make sure that the flat cable and flexible board are not cracked or bent at the terminal.
Do not insert the cable insufficiently nor crookedly.



Cut and remove the part of gilt
which comes off at the point.
(Take care that there is some pieces of gilt left inside.)

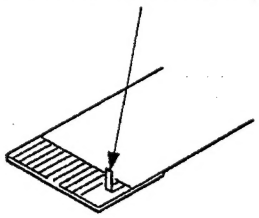


TABLE OF CONTENTS

SECTION 1
GENERAL

This section is extracted from DSR-40/40P instruction manual.

Features

The DSR-40/40P is a ¼-inch digital videocassette recorder that uses the DVCAM digital recording format. This system achieves stable, superb picture quality by digitally processing video signals that are separated into color difference signals and luminance signals (component video).
When connected to Sony Edit Station™, the unit serves as part of powerful non-linear editing system[1]. The unit is equipped with a full-fledged analog interface to support hybrid systems that combine conventional analog equipment with digital equipment.

The DSR-40/40P's main features are described below.

DVCAM Format

DVCAM is based on the consumer DV format, which uses the 4:1:1 component digital format (DSR-40) or the 4:2:0 format (DSR-40P), and provides a ¼-inch digital recording format for professional use.

High picture quality, high stability

Video signals are separated into color difference signals and luminance signals, which are encoded and compressed to one-fifth size before being recorded to ensure stable and superb picture quality.
Because the recording is digital, multi-generation dubbing can be performed with virtually no deterioration of quality.

Wide track pitch

The recording track pitch is 15 µm, fully 50 percent wider than the DV format's 10-µm track pitch. Thanks to this feature, the DVCAM format sufficiently meets the reliability and precision requirements of professional editing.

High-quality PCM digital audio

PCM recording makes for a wide dynamic range and a high signal-to-noise ratio, thereby enhancing sound quality.
There are two recording modes: 2-channel mode (48-kHz sampling and 16-bits linear code), which offers sound quality equivalent to the DAT (Digital Audio Tape) format, or 4-channel mode (32-kHz sampling and 12-bits nonlinear code).

Playback compatibility with DV format

A DV cassette recorded on a DV-format VCR can be played back on this unit. (Cassettes recorded in LP mode cannot be played back.)

Choice of two cassette sizes

The unit can use both standard-size and mini-size DVCAM cassettes.
- According to cassette size, it automatically changes the position of the reel drive plate.
- The maximum recording/playback times are 184 minutes for standard size cassettes and 40 minutes for mini-size cassettes.

Facilities for High-efficiency Editing

The unit provides an abundance of functions that enhance editing efficiency and precision.

Remote control

The unit can be operated by remote control from an editing controller that supports the RS-422A interface or from a SIRCS[2]-system remote control unit such as the optional DSRM-10, or DSRM-20.

1) **Non-linear editing**
This is an editing method that uses video and audio signals that have been digitally encoded and recorded on a hard disk as digital data. When compared with conventional (linear) editing methods, non-linear editing offers vastly improved efficiency in editing operations, such as by eliminating tape transport time.

2) **SIRCS (Sony Integrated Remote Control System)**
A command protocol to remote control Sony professional videocassette recorders/players.

High-speed search function

If you use the optional remote control unit, the unit has a picture search function that allows you to view color picture at playback speeds up to 14 times normal speed (DSR-40) or 17 times normal speed (DSR-40P) in forward and reverse directions.
When remote-controlling this unit in shuttle mode from an editing controller or a remote controller, you can search at any speed in the range 0 (still) to 14 times normal (DSR-40) or 17 times normal (DSR-40P) in both directions. You can also search frame-by-frame in jog mode.
You can also hear playback audio.

Jog audio function

If you use the optional remote control unit, audio can be monitored at various playback speeds when in jog mode. The audio signals are once stored in memory and then played back at the same rate as the search speed. This allows you to use audio playback to find the desired edit points.

Other Features

Analog output interfaces

The unit comes with analog output interfaces enabling it to be connected to analog video and audio equipment.
- Analog video: Include composite video, component video (Y/R–Y/B–Y), and S-video outputs.
- Analog audio: The XLR-type (3-pin) analog audio outputs are provided.

"Power-on playback" function (in repeat playback mode)

You can start playback immediately when the unit turns on.

Compact size

The unit achieves compact size suitable for using on a demonstration or a bridal. The unit is also equipped with basic functions that are needed for videocassette recorders and players used in professional digital video editing systems.

Menu system for functionality and operation settings

The unit provides a menu system to make its various functions easier to use and set up its operation conditions.

Superimposition function

Time code, operation mode indications, menus, alarm messages, and other text data can be superimposed and output in analog composite video signals.

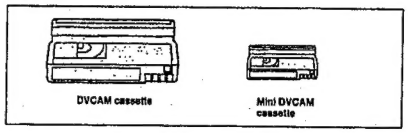
Easy maintenance function

The unit's digital hours meter functions include two kinds of tally operations for head drum usage hours, and tape threading/unthreading times. The tally results can be viewed on the video monitor.

Notes on Video Cassettes

Usable cassettes

Use Standard-DVCAM cassettes or Mini-DVCAM cassettes with this VCR. PDV-184ME can record programs for 184 minutes and PDVM-40ME can record for 40 minutes.
You can get the highest quality pictures with this digital videocassette recorder using DVCAM cassettes. You may not be able to get as good quality with other cassettes. We recommend using DVCAM cassettes so that you can record your one-time events in highest quality.

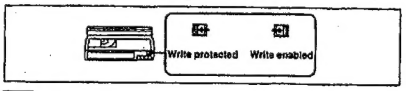


Cassette memory

Cassette memory is an optional feature that is mounted on some Standard DVCAM cassettes and Mini DVCAM cassettes. When you record a program, the recording date and time, and the programs' position on the tape are stored in the cassette memory so that you can quickly locate the program later on. CM16K indicates that you can use the cassettes 16 Kbits of data can be stored on. On this VCR, you can use the cassettes up to 16 Kbits of data can be mounted on.

To save a recording

To prevent accidental erasure of a recording, slide in the safety switch on the cassette so that the red portion becomes visible. To record on a tape, slide out the switch so that the red portion is hidden.

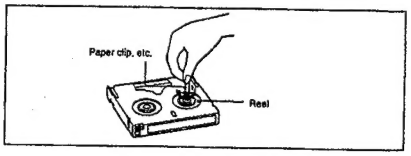


Note

DVCAM, DV, miniDV and CM are trademarks.

Checking the tape for slack

Using a paper clip or a similar object, turn the reel gently in the direction shown by the arrow. If the reel does not move, there is no slack. Insert the cassette into the cassette compartment, and after about 10 seconds take it out.



Notes on Recording / Playing

Copyright precautions

On recording
You cannot record any software having copyright protection signals on this VCR. If you start recording protected video and audio signals, a warning message appears on the monitor screen and the VCR stops recording.

On playback
When you play back software having copyright protection signals on this VCR, you may not be able to copy it onto other equipment.

Limitations caused by the difference in format

This VCR can record, play back and edit the tapes recorded in DVCAM format. It can also play back the tapes recorded in DV format (SP mode). However, due to the difference in format, you may not be able to record or edit some tapes affected by recording conditions of the tape (e.g., A tape originally recorded in DV format is dubbed in DVCAM format). For details, refer to "Compatibility of DVCAM and DV format" on page 62.

No compensation for contents of the recording

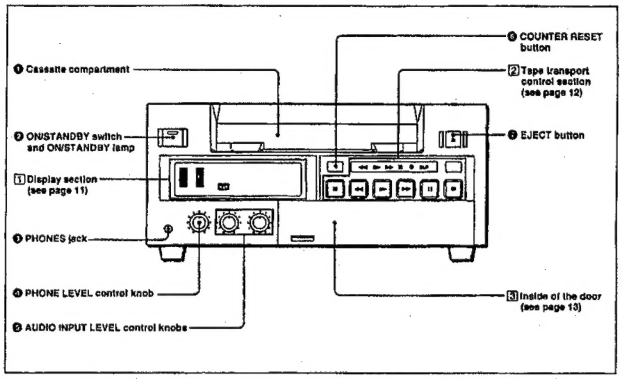
Contents of the recording cannot be compensated for if recording or playback is not made due to a malfunction of the VCR, video tape, etc.

Note

You cannot play back a DVCAM tape recorded in other color systems on this VCR.

Location and Function of Parts

Front Panel



❶ Cassette compartment
Accepts standard-size or mini-size DVCAM digital videocassettes. When using a mini-size cassette, insert it into the center of the compartment.
For details of usable cassettes, see page 8.

❷ ON/STANDBY switch and ON/STANDBY lamp
Press this switch to turn on the power, and the ON/STANDBY lamp lights in green. Press it again to turn to standby mode, and the lamp lights in red.

Note
When the REMOTE/LOCAL switch is set to REMOTE, you cannot turn the unit to standby mode.

❸ PHONES jack (stereo minijack)
Connect stereo headphones for headphone monitoring during recording or playback.
The audio signal you want to monitor can be selected with the AUDIO MONITOR selector inside of the door (3).

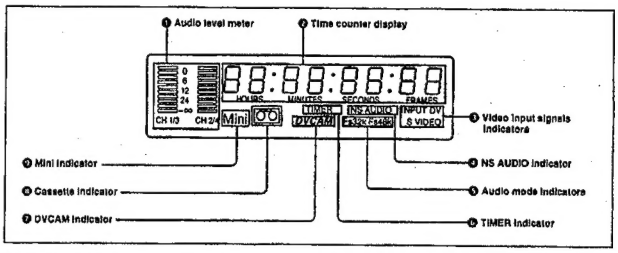
❹ PHONE LEVEL control knob
Controls the volume of the headphones connected to the PHONES jack.

❺ AUDIO INPUT LEVEL control knobs
When recording, you can use these knobs to set audio input levels for CH-1 (channel 1) and CH-2 (channel 2), respectively.

❻ COUNTER RESET button
Press this button to reset the tape counter in the display window to "0:00:00 (0H00M00S)". This button does not work when displaying the time code or the remaining time.

❼ EJECT button
Press this button to eject a cassette.

1 Display section



❶ Audio level meter
Indicates the recording level during recording or EE mode, and the playback level during playback. When the audio level exceeds 0 dB, the red indicator lights.

Note
If you play back the tape whose audio was only recorded on channel 2, the audio level meter for CH2/4 may not function.

❷ Time counter display
Indicates the following:
- Time data: count value of the time counter, time code and remaining time.
- Alarm messages *(see page 55)*.
- Messages for self-diagnosis function *(see page 59)*.

Notes
- For DSR-40P: Time code is set to the non drop frame mode only.
- Time code is indicated as follows:
  Drop frame: "00:00.00:00" (DSR-40 only)
  Non drop frame: "00:00:00:00"

❸ Video input signals indicators
Indicates the currently selected video input signals. INPUT VIDEO, INPUT S VIDEO, or INPUT DV lights.

❹ NS (Non Standard) AUDIO indicator
Lights when the VCR plays back a tape whose audio recording was made in the unlock mode, or when unlock mode signals are input through the DV jack.
For details of unlock mode, see page 62.

❺ Audio mode indicators
Indicates the audio mode during playback or recording or while in EE mode.
- During playback it indicates the audio mode in which the tape was recorded.
- During recording or while in EE mode, it indicates the currently selected audio recording mode. You can select audio recording mode by setting "AUDIO MODE" menu *(see page 53)*.

Fs32k: Lights when playing the tapes recorded in 4-channel mode, or recording a tape in 4-channel mode.
Fs48k: Lights when playing the tapes recorded in 2-channel mode, or recording a tape in 2-channel mode.

Note
When recording in 4-channel mode on this VCR, audio signals are recorded only in channels 1/2.

❻ TIMER indicator
Lights when setting the TIMER switch to REPEAT.

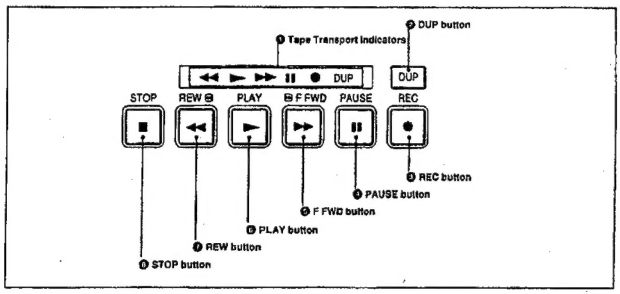
❼ DVCAM indicator
Lights except playing back the DV-formatted tapes.

❽ Cassette indicator
Lights when inserting a digital video cassette available for this VCR. It flashes when ejecting a cassette.

❾ Mini indicator
Lights when inserting mini-size digital video cassette.

2 Tape transport control section

Note
When the tape reaches to its beginning or its end by rewinding or fast-forwarding, the unit turns to playback pause mode. Then, the playback pause mode is released after the time which is set at "STILL TIMER" menu (See page 52).



❶ Tape Transport indicators

❷ DUP (duplicate) button
Use this button to make a work tape having the same time codes as the source tape.
For details on duplication, see page 28.

❸ REC (record) button
When you press the PLAY button while holding down this button, the indicator lights and recording begins. To set the VCR to recording pause mode, press the PAUSE button while holding down this button.

❹ PAUSE button
When you press this button, the indicator lights, and the VCR is set to pause mode.

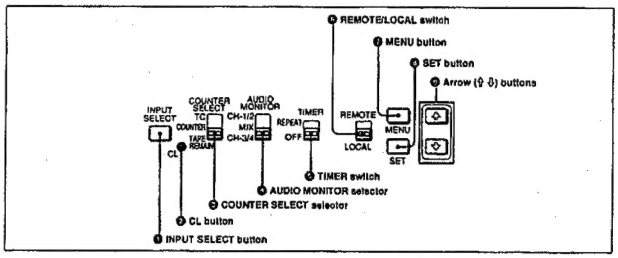
❺ F FWD (fast forward) button
When you press this button, the indicator lights and the tape is fast forwarded. During fast forward, the picture does not appear on the monitor (you can see the picture of the EE mode during fast forward).
To search forward, hold this button down during fast forward.

❻ PLAY button
When you press this button, the indicator lights and playback begins.
If you press this button while holding down the REW button during stop, the tape is rewound to its beginning and starts playing automatically (during rewind, the REW indicator lights and the PLAY indicator flashes).

❼ REW (rewind) button
When you press this button, the indicator lights and the tape starts rewinding. During rewind, the picture does not appear on the monitor (you can see the picture of the EE mode during rewind).
To search backward, hold this button down during rewind.
If you press the PLAY button while holding down this button during stop, the tape is rewound to its beginning and starts playing automatically (during rewind, the REW indicator lights and the PLAY indicator flashes).

❽ STOP button
Press this button to stop the current tape transport operation.

3 Inside of the door



❶ INPUT SELECT button
Selects input signals. Each press of this button cycles through three video signal selection options: video, S-video, and DV input. When you select one of these options, the corresponding indicator in the display lights up.

❷ CL (Clear) button
Press this button to make the unit to the state of reconnecting the AC power cord. When you press this button, the setting in the menu is not initialized.

❸ COUNTER SELECT selector
Select the type of time data in the time counter display.
TC: Time code
COUNTER: Count value of the time counter
TAPE REMAIN: Remaining time

❹ AUDIO MONITOR selector
Use to select the audio track you want to hear when playing back a tape recorded in 4-channel mode (Fs32k).
CH-1/2: Channels 1/2 only
MIX: Channels 1/2 and channels 3/4 (mix)
CH-3/4: Channels 3/4 only

❺ TIMER switch
Use to select Auto Repeat using an external AC timer (not supplied).
REPEAT: When the power is supplied to this VCR, a tape rewinds to its beginning automatically and playback starts. The VCR repeats the playback from the beginning to the first index (if there is no index on the tape, to the unrecorded portion; if no unrecorded portion, to the tape end). Auto repeat also functions if you set this switch to REPEAT during playback.
OFF: Auto Repeat is released.

❻ REMOTE/LOCAL switch
Selects whether the unit is operated from its front panel or from external (remote) equipment.
REMOTE : The unit is operated from an editing controller connected to the REMOTE connector. Available tape transport buttons (on the front panel or optional remote control unit) are set in the menu.
LOCAL : The unit is operated from its front panel, or from a SIRCS-system remote control unit connected to the CONTROL S jack.

Location and Function of Parts

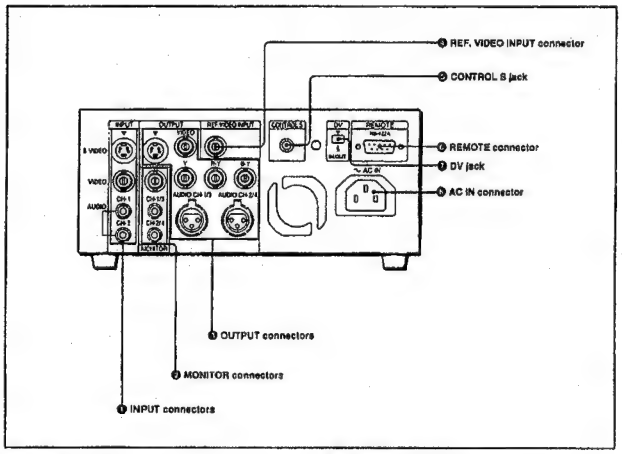
❼ MENU button
Press this button to display the menu on the monitor screen. Press it again to return from the menu display to the usual display.

Note
If you set the REMOTE/LOCAL switch to REMOTE while the menu display is on the monitor, it returns to the usual display.
On how to use the menu, see Chapter 5 "Menu Settings".

❽ SET button
Press this button to save selected menu items to the unit's memory.

❾ Arrow (⇧ ⇩) buttons
Use these buttons to move around the menu items.

Rear Panel



❶ INPUT connectors
Input video and audio signals. To connect a VCR equipped with the S-video output jack, use the S VIDEO jack on this VCR.

❷ MONITOR connectors
Output video and audio signals for monitoring.

❸ OUTPUT connectors
Output video and audio signals. To connect a VCR equipped with the S-video input jack, use the S VIDEO jack on this VCR. To connect a VCR equipped with the component input connectors, use the Y, R–Y, B–Y connectors on this VCR.

Note on EE mode
When the S-video, video, or DV signal is input, this VCR cannot output component signals. You can only output the component signal during normal playback.

❹ REF.VIDEO INPUT connector (BNC-type)
Input a reference video (black burst) signal.

❺ CONTROL S jack
When controlling this VCR from an optional remote control unit such as the DSRM-10/20 (not supplied), connect the unit to this jack.

Note
SIRCS-system has the same function as CONTROL S-system.

❻ REMOTE connector (D-sub 9-pin)
Connect an editing controller with the RS-422A interface for remote-control of this VCR.

❼ DV jack
The DV jack is i.LINK compatible. Use when the equipment connected to the VCR has a DV jack. If you connect the VCR and the other equipment using DV jacks, you can minimize deterioration of picture quality during dubbing, or capturing still pictures by digital processing. For details, refer to the instruction manual of the equipment you use.

Note
i is a trademark of Sony Corporation and indicates that this product is in agreement with IEEE1394-1995 specifications and their revisions.

❽ AC IN connector
Connect to an AC power outlet using the supplied power cord.

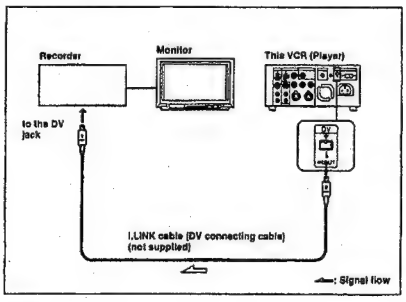
Playback

This section describes the necessary connections, settings and operations to perform playback on this unit. The same settings and operations apply whether you are using the unit as part of an editing system, for dubbing, or as a stand-alone videocassette player.

Connections for Playback

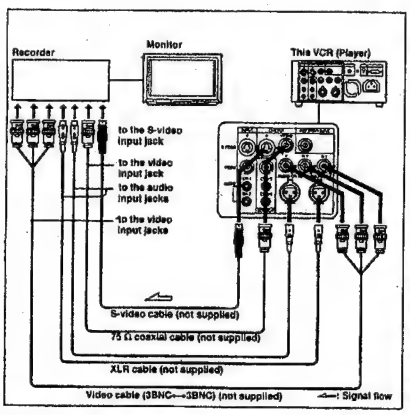
To digital video equipment with the DV jack

The video and audio signals are sent with hardly any degradation, enabling high-quality recording. The signal flow is automatically detected so you need not make separate connections for input and output.



Notes
- The external lock function of this unit only supports the standard sync signals. With the DV connection, select the DV input with the INPUT SELECT button on this VCR to prevent malfunction resulting from noise, etc.
- Set DV EE OUT in the menu to OFF *(see page 52)*.
- With the DV connection, the sound is recorded in the same audio recording mode as that of the source tape.
- With the DV connection, tape information (recording date, camcorder data, etc.) recorded on the source tape is transmitted from this VCR (player).

To video equipment without the DV jack



Notes
- When you connect output jacks of the recorder to input jacks of this VCR, select the input correctly to prevent a humming noise.
- Distorted signals (e.g., when played back at a speed other than normal) will not be recorded properly.
- The indications (Time code, alarm messages, and menu, etc.) displayed on the monitor screen are output only via the MONITOR connector.
- If the DV input is selected, you cannot perform the playback synchronized with the video reference (black burst) signal.

Settings for Playback

Preparation on the player (this VCR)

1 Power on the video monitor, then set the monitor's input according to the input signals from the recorder.

2 Set up the recorder.
For details, see "Preparation on the recorder" below.

3 Power on this unit by pressing the ON/STANDBY switch.

The ON/STANDBY lamp lights in green.

4 When you play back a tape recorded in 4-channel mode (Fs 32k), set the AUDIO MONITOR selector to MIX *(see page 13)*. Then select the precise balance between the tracks with the AUDIO MIX BALANCE in the menu *(see page 53)*.

Notes

- With the DV connection, the playback VCR's AUDIO MONITOR (sound selection) and AUDIO MIX BALANCE (audio balance adjustment) do not function on the source audio output through the DV jack.
- You cannot change the input signal selection during playback or playback pause mode.

Preparation on the recorder

- Insert a tape for recording.
- Select the video and audio input signals to be recorded.

Note

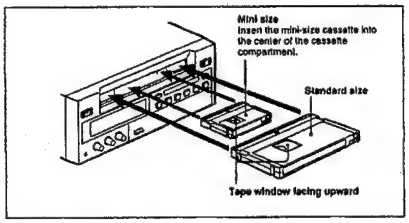
Editing is not possible with a tape that is copyright protected.

Playback Procedure

Notes

- When controlling this unit from an editing controller connected to the REMOTE connector, set the REMOTE/LOCAL switch to REMOTE. When not, set it to LOCAL.
- Do not insert the cassette forcibly. The VCR may be damaged.

1 After checking the tape for slack, hold the cassette so that the tape window is facing upward, then insert it into this unit as illustrated below.
For details on checking the tape for slack, see page 9.



The cassette is automatically drawn into the unit.

2 Press PLAY.

This starts the playback operation.

Playback Functions

You can enjoy various playback functions using the optional remote control unit.

For details, refer to the operating instructions supplied with the remote control unit.

Playing at various speeds (JOG)
You can play at various speeds, or frame by frame.

Searching (SHUTTLE)
You can easily locate the desired scene, and you can quickly and accurately determine edit points.

Searching using the index function (DSRM-20 only)
Three kinds of search are available on this VCR:
- Searching for the beginnings of recordings: Index search
- Searching for a point on the tape where the recorded date changes: Date search
- Searching for scenes recorded in the photo mode with a digital camcorder: Photo search

Note

When S-video or video input is selected and no signal is input in search mode, the search screen becomes noisy. In such cases, input the signal or select DV input.

For a description of search operations via external equipment, see the equipment's operating instructions.

Displaying tape information (DSRM-20 only)
If you record on a tape using a Sony digital camcorder DSR-200/200P/200A/200AP/PD100/PD100P, camcorder data (the shutter speed, program AE mode, white balance, iris and gain) can be recorded on the tape. You can check these data during playback on this VCR.

Auto Repeat

This VCR can repeat the playback of all, or a part of the tape.

1 Set the TIMER switch on the front panel to REPEAT.

The TIMER indicator on the front panel lights.

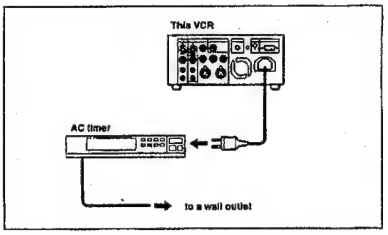
2 Press REW to rewind the tape to its beginning.

3 Press PLAY.

Playback starts. The VCR repeats the playback from the beginning to the first index (if there is no index on the tape, to the unrecorded portion; if no unrecorded portion, to the tape end).

Auto Repeat using an external AC timer
If you connect an external AC timer (not supplied) to this VCR, you can repeat playback automatically at the preset time.

1 Connect an external AC timer (not supplied) to this VCR.



2 Set the TIMER switch on the front panel to REPEAT.

The TIMER indicator in the display window lights.

3 Set the start time using the external AC timer.

At the preset time, the power turns on, and Auto Repeat playback starts automatically within one minute. The VCR repeats the playback from the beginning to the first index (if there is no index on the tape, to the unrecorded portion; if no unrecorded portion, to the tape end).

Playback

Notes

- The VCR cannot search for an index or unrecorded portion within 20 seconds from the beginning of the tape.
- While a tape is running, do not turn off the power using an AC timer. The VCR and a tape may be damaged. When turning off the power of the VCR, make sure to press the STOP button on this VCR first to stop the tape transport, then turn off the power.

To stop Auto Repeat
Press the STOP button.

To release Auto Repeat mode
Set the TIMER switch to OFF.

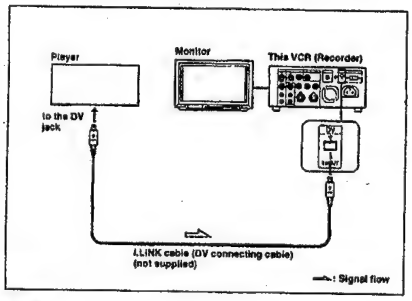
Recording

This section describes the necessary connections, settings and operations to perform recording on this unit. The same settings and operations apply whether you are using the unit as part of an editing system, for dubbing, or as a stand-alone recorder.

Connections for Recording

To digital video equipment with the DV jack

The video and audio signals are sent with hardly any degradation, enabling high-quality recording. The signal flow is automatically detected so you need not make separate connections for input and output.

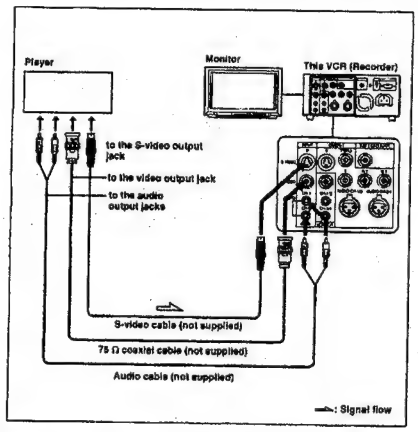


Notes

- With the DV connection, the sound is recorded in the same audio recording mode as that of the source tape. To record in a different audio recording mode from the source tape, use the INPUT connectors instead.
- With the DV connection, tape information (recording date, camcorder data, etc.) recorded on the source tape is transmitted from the other VCR (player). As a result, when you play back a recorded tape and press the DATA CODE button on the optional DSRM-20 remote control unit, the same tape information recorded on the source tape is displayed on the monitor screen. However, contents of the cassette memory are not transmitted. In addition, the time code is newly recorded on the tape on this VCR, except when copying a tape in Duplication mode.

Recording

To video equipment without the DV jack



Notes

- When recording the analog input signals, this VCR can digitally output the signals from the DV jack for backup. Set DV EE OUT in the menu to ON *(see page 52)*.
- When you connect output jacks of this VCR to input jacks of the player, select the input correctly to prevent a humming noise.
- Distorted signals (e.g., when played back at a speed other than normal) will not be recorded properly.
- The indications (Time code, alarm messages, and menu, etc.) displayed on the monitor screen are output only via the MONITOR connector.

Settings for Recording

Preparation on the recorder (this VCR)

Notes

- Before recording, set the clock on the VCR so that the recording time can be written into the index signal. You can set the clock by setting the CLOCK SET menu *(see page 53)*.
- When controlling this unit from an editing controller connected to the REMOTE connector, set the REMOTE/LOCAL switch to REMOTE. When not, set it to LOCAL.
- Editing is not possible with a tape that is copyright protected.

1 Power on the video monitor, then set the monitor's input according to the input signals from this unit.

2 Set up the player to play back a tape.
For details, see "Preparation on the player" on the next page.

3 Power on this unit by pressing ON/STANDBY switch.

The ON/STANDBY lamp lights in green.

4 Use the COUNTER SELECT selector to select the type of time data to be used.

Type of time data	Set the selector to
Time code	TC
Count value of the time counter	COUNTER

5 Select the video and audio input signals to be recorded.

Press INPUT SELECT to select the desired signal. Each press of this button cycles through three signal selection options: video, S-video, and DV input. Each selection is shown by a lit indicator in the display window.

Note

Once you have started recording, you cannot change the input signal selection (except during recording pause mode).

6 When using the line connections (INPUT connectors), select the audio mode.

Select the desired mode by setting the AUDIO MODE menu.

Audio mode	Set the menu to
2-channel mode	Fs48k
4-channel mode	Fs32k

On how to use the menu, see Chapter 5 "Menu Settings".

Notes

- In the DVCAM format, there are two audio recording modes, with either two channels at 48 kHz or four channels at 32 kHz. It is not possible to select other modes (for example with four channels at 48 kHz).
- When recording in 4-channel mode on this VCR, audio signals are recorded only in channels 1/2.
- Once you have started recording, you cannot change the audio mode selection.

7 Use the AUDIO INPUT LEVEL control knobs to adjust audio input levels.

Watching the audio level meter *(see page 11)*, adjust the level so that the meter does not indicate higher values than 0 dB when the audio signal is at its maximum.
When the level exceeds 0 dB, sound distortion occurs.

Note

With the DV connection, the recorder VCR's AUDIO MODE (sound selection) and AUDIO INPUT LEVEL (audio balance adjustment) do not function.

Preparation on the player

- Insert a source tape.
- If the player VCR has an EDIT switch, set it to ON.
- Turn off the on-screen display.

Note

With the DV connection, the playback VCR's AUDIO MONITOR (sound selection) and AUDIO MIX BALANCE (audio balance adjustment) do not function on the source audio output through the DV jack.

Recording Procedure

1 After checking that the cassette's safety switch is set to write enabled position and the tape for slack, hold the cassette so that the tape window is facing upward, then insert it into this unit.

For details of the cassette's safety switch, see page 8. For details of checking the tape for slack, see page 9.

The cassette is automatically drawn into the unit and the tape is wound round the head drum. The tape is stationary while the head drum rotates.

2 Press the playback button on the player.

This starts the player's playback operation.

3 Press and hold REC on this VCR, and press PLAY.

This starts the recorder's recording operation.

To stop recording
Press the STOP button.

Duplication

If you copy a source tape, using the DUP (duplicate) button on this VCR, you can copy the time code recorded on the source tape as they are. You can easily make a work tape having the same time codes as the source tape.
The duplicate function on this VCR works only when using a source tape recorded in DVCAM format and making DV connections.

1 Connect this VCR and the other (playback) VCR, using an i.LINK cable (DV connecting cable) (not supplied) and select DV with the INPUT SELECT selector on this VCR.

2 Locate the points where you want to start playback and recording.

3 Press STOP on this VCR to stop the tape transport operation.

4 Press and hold DUP on this VCR, and press PLAY.

The DUP indicator flashes and this VCR enters duplicate-standby mode.

Notes

- If the other (playback) VCR has already started playback, the DUP indicator lights and duplication starts immediately.
- If the other (playback) VCR is in the playback pause mode, duplication starts immediately and this VCR continues to record a still picture and a certain time code.

5 Press the play button on the other VCR to start playback.

The DUP indicator on this VCR lights and duplicate starts.

To adjust the point where duplication starts
In step **4** above, press and hold the DUP button instead of the PLAY button, and press the PAUSE button. This VCR remains recording standby mode until you press the PAUSE button again.
After the other VCR starts playback, press the PAUSE button at the point where you want to start duplication.

To stop duplication
Press the STOP button.

Notes

- During duplication, do not change the speed of the player's tape or set it to pause mode. Otherwise, the time code of the recorded tape becomes out of sequence and you cannot use it for editing.
- During duplication, time counter does not appear. Check it in the other (player) VCR.
- When you start duplicating, the first part of the source tape may be dropped on the copied tape. Play back the source tape from the preceding point. You cannot completely copy the tape if the source tape is recorded from its beginning point.
- You may not be able to copy the first part or an unrecorded portion of the source tape. Locate the recorded portion on the source tape, then start copying.
- The recording does not stop the moment you press the STOP button to stop editing. The source picture may be recorded a little longer than you expected.
- If you duplicate a tape by using two DSR-40/40Ps, set DV EE OUT in the menu of the player to OFF *(see page 52)*.
- The index signals are not recorded when the duplication starts.
- If you set the REMOTE/LOCAL switch to REMOTE during duplication, the tape stops.

Notes on Usage in the Editing System

If you use the unit in an editing system, the following functions are limited.

Notes on general

- Component signals are only output during playback or when selecting DV input. This unit cannot be used as a converter from analog input to component output.
- This unit is not equipped with the synchronization function. Adjust the edit timing with the editing controller, and set sync grade to Preroll & Play.
- Pause mode will be released after the chosen time in the menu to protect the tape except when using the unit in an editing system.
- When AUTO REPEAT is set to ON, and the tape reaches to its end point by fast-forwarding, the jog dial control is not available from external equipment connected to the REMOTE connector.
- You cannot change input signal selection during playback or playback pause mode.
- When S-video or video input is selected and no signal is input in search mode, the search screen becomes unstable.
- When the tape reaches to its beginning or end using the REW or F FWD button, the unit turns to playback pause mode at the point in a few preceding seconds from its beginning or end.

Notes on connection

- When you use this unit as a recorder of a system with the FXE-120 whose version is 1.0, this unit cannot be used in the drop frame system. If you want to use it in the drop frame system, upgrade the FXE-120 to version 1.01 (Only for DSR-40).
- When inputting a composite or S-video signal, a composite or S-video output signal in EE mode is a through signal of the input.
- When inputting a composite or S-video signal, a component signal in EE mode is not output. Component output is only available during playback or when selecting DV input.
- If the unit turns off when AUTO OFF has been set to OFF, the operations cannot be available with equipment connected to the REMOTE connector. Turn on the power again and perform the operation.
- When inputting a DV signal, and outputting a composite or S-video signal in EE mode, only the color burst signal is exchanged.
- When inputting a DV signal, the unit does not perform a playback synchronized with the external sync signal. This playback is only available when selecting S-video or video input.

Notes on editing

- With the DV connection, the editing accuracy is less than analog editing accuracy.
- This unit is not equipped with the first edit function.
- Since this unit does not support CTL, the time code of the recorded tape becomes out of sequence and you cannot use it for editing. In such case, adjust the editing IN point.

Settings on editing control unit

When connecting an editing control unit, make the setting as follows, according to the model.

FXE-100/120

Set the VCR device constants as follows:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
80	30	00	96	05	05	0A	8A	0A	08	FE	00	80	5A	FF

FXE-100P/120P

Set the VCR device constants as follows:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
81	30	00	7D	05	05	0A	8A	0A	08	FE	00	80	5A	FF

BVE-600 (NTSC model)

Set the VCR device constants as follows:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
80	30	00	96	05	05	0A	8A	0A	09	FE	00	80	5A	FF

BVE-600 (PAL model)

Set the VCR device constants as follows:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
81	30	00	7D	05	05	0A	8A	0A	09	FE	00	80	5A	FF

RM-450/450CE

Set the DIP switches as follows:

Left switch

7	6	5	4	3	2	1	0
OFF	–	–	OFF	–	–	–	–

Right switch (RM-450)

7	6	5	4	3	2	1	0
OFF	–	OFF	ON	OFF	OFF	ON	ON

Right switch (RM-450CE)

7	6	5	4	3	2	1	0
ON	–	OFF	ON	OFF	OFF	ON	ON

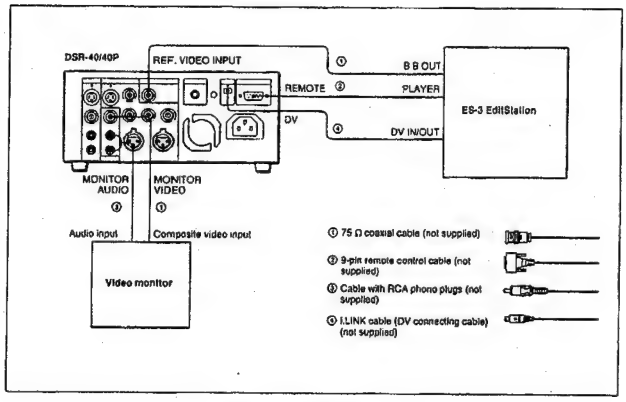
If the edit timing is out of adjustment, change the setting of the numbers 0 to 2 of the right switch.

Connections for a Digital Non-linear Editing

The unit can be connected to an ES-3 EditStation to configure a digital non-linear editing system.
You can transfer video, audio, time code, and other compressed data from this unit to the ES-3.
The unit can transfer index pictures recorded on tape and ClipLink log data stored in cassette memory to the ES-3 in an instant.

The following figure shows a connection diagram for non-linear editing system in which this unit serves as the player.

For connections of the ES-3 and its peripheral devices, refer to the ES-3 instruction manual.



Setting of DSR-40/40P

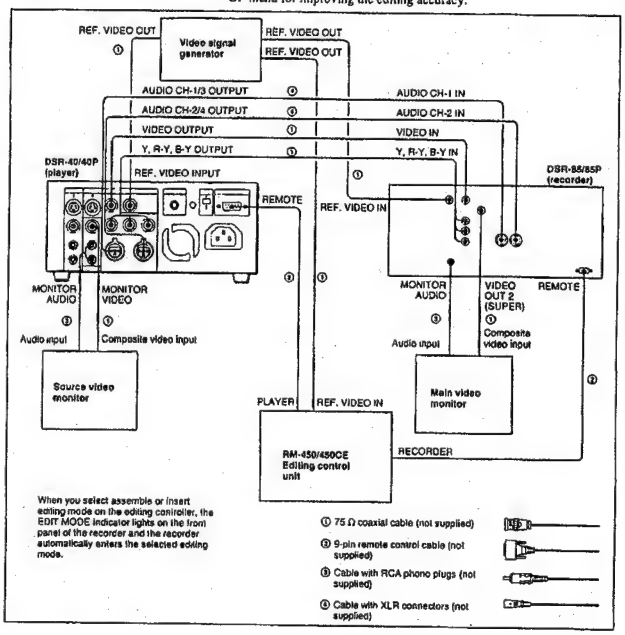
Switch	Setting
REMOTE/LOCAL	REMOTE

Connections for a Cut Editing System

The following figure shows a cut editing system configuration that uses this unit as the player and a DSR-85/85P as the recorder.
For details of connecting devices other than the DSR-40/40Ps, refer to the instruction manual of each device.

Notes

- When S-video or composite input is selected, S-video or composite output is a through signal.
- The preroll time of the setting on the RM-450/450CE is required for more than five seconds.
- Set RS-422 CUE-UP MODE to WITH VIDEO in the DSR-40/40P's SET UP menu for improving the editing accuracy.



Connections for a Cut Editing System

Settings on editing controller

For details on the settings of the editing controller, refer to "Adjusting an Edit Timing" on page 40.

Settings on the DSR-40/40P (player) and DSR-85/85P (recorder)

Switch	recorder	player
REMOTE/LOCAL	REMOTE	REMOTE

For details, refer to the instruction manual of DSR-85/85P.

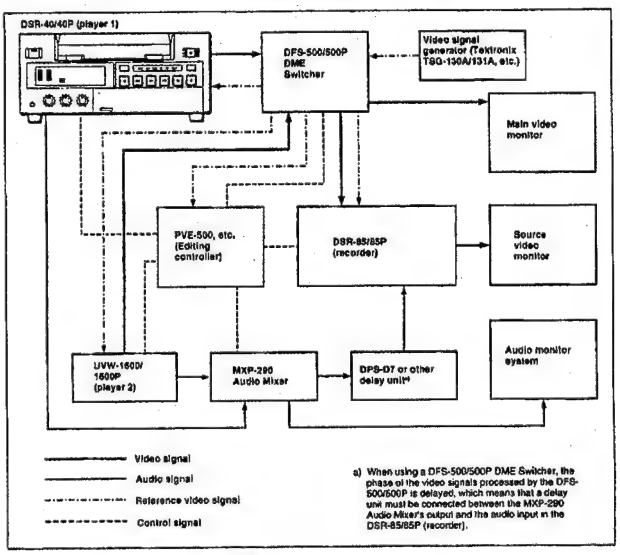
About reference video signals

In order to provide stable video and audio signals for analog editing, it is necessary for the built-in time base corrector (TBC) to operate correctly. To ensure this, input a reference video signal synchronized with the video signal to the REF. VIDEO INPUT (IN) connector.

Connections for an A/B Roll Editing System

The following is an example configuration of A/B roll editing system using the DSR-40/40P and DSR-85/85P.
In this configuration, the DSR-40/40P is used as player 1, the UVW-1600/1600P (an analog Betacam videocassette player) as player 2, and the DSR-85/85P as recorder. To create a final tape (a tape that contains a completely packaged program) in Betacam format, you can use a Betacam VCR such as the UVW-1800/1800P as the recorder.

The purpose of the following figure is to clearly indicate the flow of signals among the component devices in this system. The specific connections and DSR-85/85P (recorder) settings for this system are described on the following pages.



Note

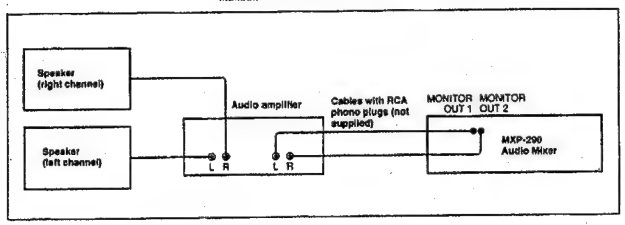
Use the recorder equipped with the synchronization function.

Connections for an A/B Roll Editing System

Audio monitor system connections

The following shows an example of audio monitor system connections.

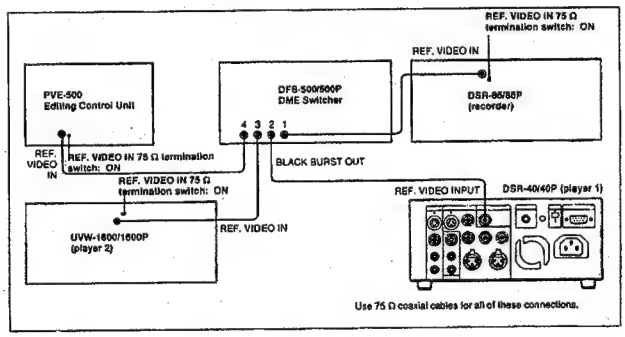
For details of these connections, refer to each connected device's instruction manual.



Reference video signal connection

When you perform recording or editing, be sure to use a reference video signal.

For details of the reference video signals, see "About reference video signals" on page 34.

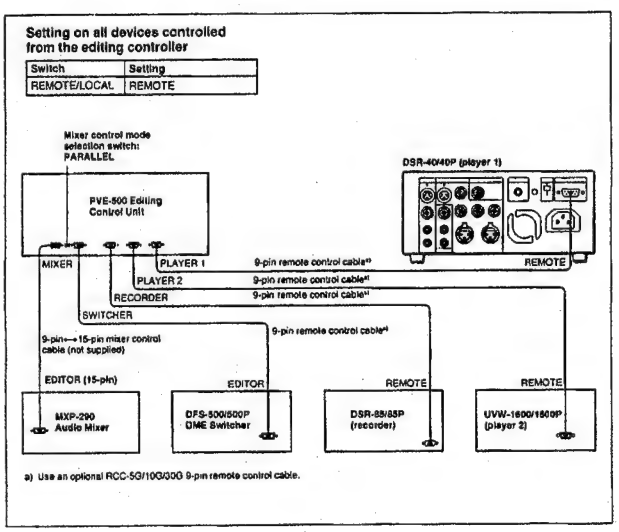


Control signal connections

The following shows an example of control signal connections to enable the editing controller to control all other A/B roll editing system devices.

Setting on all devices controlled from the editing controller

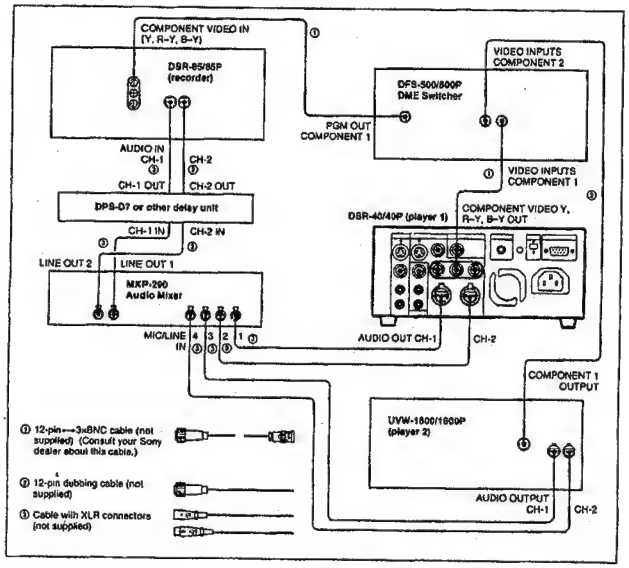
Switch	Setting
REMOTE/LOCAL	REMOTE



Connections for an A/B Roll Editing System

Video/audio signal connections

The following shows an example of video/audio signal connections in an A/B roll editing system. In this example, analog component signals are used as the video signals and XLR 3-pin connectors are used as audio input/output connectors.



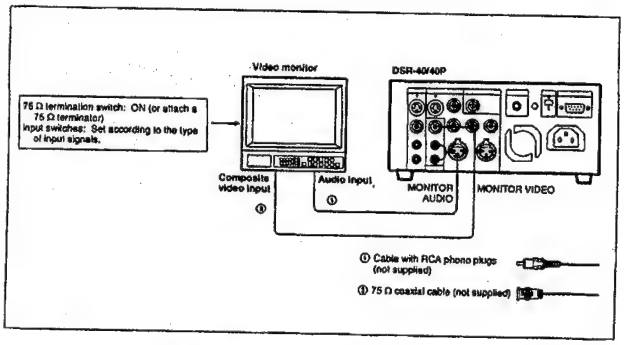
Settings on the DSR-85/85P (recorder)

Switch	Setting
AUDIO IN 600 Ω ON/OFF	ON
AUDIO IN –6 dBu/0 dBu/+4 dBu	Normally +4 dBu

For details of the video/audio input and audio mode settings, refer to the instruction manuals for the devices used.

Connection of a video monitor

Set up the following connections to enable monitoring of video and audio signals on a video monitor. In addition to video signals, you can have time data, the DSR-40/40P's operation mode, alarm messages, and other information displayed as text on the monitor screen.



Note

When you want to monitor the edited tape, use the monitor output connector on a recording VCR.

Adjusting an Edit Timing

Using this unit as a player with the RM-450/450CE

1 Set the SYNCHRO selector to ON.

2 Set the number 3 of the SYSTEM PRESET right switch to OFF (it is set to OFF at factory).

Setting this to OFF adjusts the synchronization of the recorder.

3 Execute the LEARN function.

Using this unit as a player 1 with the PVE-500

When using this unit as the player 2, the menu item is indicated in ( ).

1 Set Sync Edit of SEtUP-10 to OFF in the SETUP menu.

2 Set P1 dELAY (P2 dELAY) of SEtUP-13 (SEtUP-14) to LEArn in the SETUP menu.

3 Set rEC Sync of SEtUP-15 to On in the SETUP menu.

4 Set P1 Sync (P2 Sync) of SEtUP-16 (SEtUP-17) to OFF in the SETUP menu.

5 Execute the LEARN function.

Using this unit as a player 1 with the FXE-120/120P

- When using this unit as the player 2, the menu item is indicated in ( ).
- When using the FXE-100/100P that has been upgraded with the FXE-KIT1, the menu item is indicated in [ ].

1 Display the item 104 [301] SYNC GRADE in the SETUP menu, and set PLAYER1 (PLAYER2) to PREROLL & PLAY.

2 Display the item 301 (302) [401 as player 1, 402 as player 2] DEVICE TYPE PLAYER1 (DEVICE TYPE PLAYER2) in the SETUP menu, and set the VCR device constants.

3 Execute the LEARN function.

If the edit timing is out of adjustment, follow "Adjusting the IN point" on the next page.

Adjusting the IN point

If the actual edited point does not accurately coincide with the preset editing point, perform the fine adjustment of the edit timing using the SETUP menu of the editing control unit. This improves the editing accuracy.

1 Display the item 301 (302) [401 as player 1, 402 as player 2] DEVICE TYPE PLAYER1 (DEVICE TYPE PLAYER2) in the SETUP menu, and set it from DISABLE to ENABLE.

2 Repeat editing several times and check the shift of the editing point; that is, count the number of frames to be adjusted.

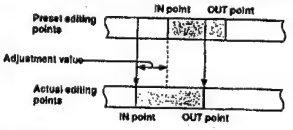
Note

The editing result may differ between DISABLE and ENABLE settings of SETUP menu item 301 (302) [401 as player 1, 402 as player 2]. Be sure to check the editing result after changing the setting to ENABLE.

3 Set the SETUP menu item 301 (302) [401 as player 1, 402 as player 2] from BYTE 01 to BYTE 10, and calculate the adjustment value.

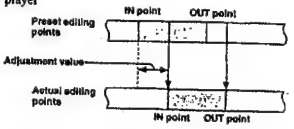
How to calculate the adjustment value

If the actual IN point shifts forward to the IN point preset on the player



08 (default setting) + number of frames obtained in step 2
Example: To adjust 5 frames
08 + 05 = 0D
Adjustment value is calculated in hexadecimal.

If the actual IN point shifts backward to the IN point preset on the player



08 (default setting) – number of frames obtained in step 2
Example: To adjust 5 frames
08 – 05 = 03

(Continued)

Adjusting an Edit Timing

4 Perform a trial editing and confirm the adjustment result.

Repeat steps 3 and 4 until best possible result is obtained.

Using this unit as a recorder with FXE-120/120P

- When using this unit as a recorder, also see chapter 4 "Using the Unit as a Recorder in an Editing System."
- When using FXE-100/100P that has been upgraded with FXE-KIT1, the menu item is indicated in [ ].

1 Display the item 102 [112] REMOTE INTERFACE in the SETUP menu, and set RECORDER to OTHERS.

2 Display the item 104 [301] SYNC GRADE in the SETUP menu, and set RECORDER to PREROLL & PLAY.

3 Display the item 303 [403] DEVICE TYPE RECORDER in the SETUP menu, and set the VCR device constants.

4 Execute the LEARN function.

If the edit timing is out of adjustment, follow "Adjusting the IN point" below.

Adjusting the IN point

If the actual edited point does not accurately coincide with the preset editing point, perform the fine adjustment of the edit timing using the SETUP menu of the editing control unit. This improves the editing accuracy.

1 Display the item 303 [403] DEVICE TYPE RECORDER in the SETUP menu, and set it from DISABLE to ENABLE.

2 Repeat editing several times and check the shift of the editing point; that is, count the number of frames to be adjusted.

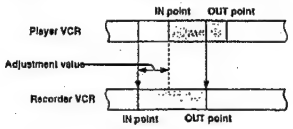
Note

The editing result may differ between DISABLE and ENABLE settings of SETUP menu item 303 [403]. Be sure to check the editing result after changing the setting to ENABLE.

3 Set the SETUP menu item 303 [403] from BYTE 01 to BYTE 10, and calculate the adjustment value.

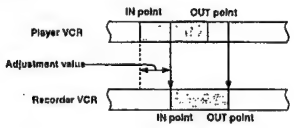
How to calculate the adjustment value

If the actual IN point shifts forward to the IN point preset on the player



08 (default setting) – number of frames obtained in step 2
Example: To adjust 3 frames
08 – 05 = 03

If the actual IN point shifts backward to the IN point preset on the player



08 (default setting) + number of frames obtained in step 2
Example: To adjust 5 frames
08 + 05 = 0D
Adjustment value is calculated in hexadecimal.

4 Perform a trial editing and confirm the adjustment result.

Repeat steps 3 and 4 until best possible result is obtained.

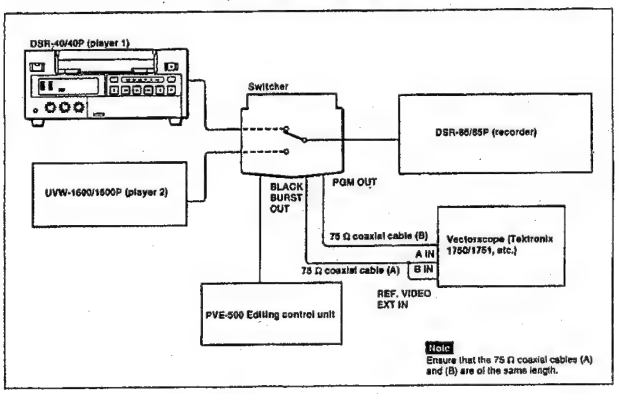
Using this unit as a player with the BVE-600

1 Set the sync grade (menu 2) to mode number 4, PREROLL & PLAY in auxiliary mode.

2 Set the VCR device constants in the setting mode.

Adjusting the Sync and Subcarrier Phases

When using two or more players, as in an A/B roll editing system, phase synchronization of the signals (i.e. system sync) is necessary and for composite signals only, the subcarrier phase must also be in sync. If not, picture instabilities or color break-up may occur at edit points.
After configuring the editing system, use a vectorscope to adjust the sync and subcarrier phase of the recorder and players. Subcarrier phase adjustment is necessary when using composite signals or Y/C signals.



Note

The sync and subcarrier phase of the output signal from the DFS-500 Switcher are automatically adjusted.

Performing a phase adjustment operation

1 Press the SCH button on the vectorscope.

The vectorscope switches to "SCH" mode.

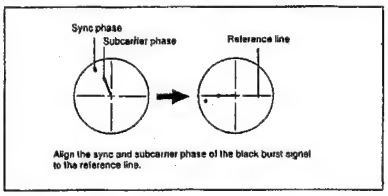
2 Press the B channel button on the vectorscope.

This displays the black burst signal from the switcher.

3 Press the EXT button on the vectorscope.

This switches the vectorscope to external synchronization mode.

4 Adjust the phase synchronization control on the vectorscope so that the sync and subcarrier phases are close to the reference line.



5 Output the player 1 signal from the switcher, using the PVE-500.

6 Press the A channel button on the vectorscope.

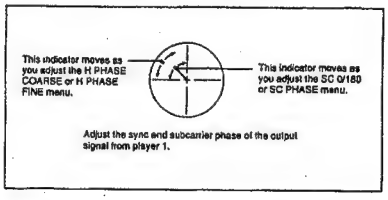
This displays the sync phase and subcarrier phase (composite signals only) of the signal from player 1.

7 On player 1, adjust the SYNC control, using the H PHASE COARSE menu for rough adjustment and the H PHASE FINE menu for fine adjustment, so that the output from player 1 on channel (A) is in correct phase alignment with the black burst signal on channel (B) *(See page 53).*

(Continued)

Adjusting the Sync and Subcarrier Phases

8 On player 1, adjust the SC control, using the SC 0/180 menu for rough adjustment and the SC PHASE menu for fine adjustment, so that the output from player 1 on channel (A) is in correct phase alignment with the black burst signal on channel (B) *(See page 53)*.



Note

When component signals are used, the subcarrier phase indicator does not appear.

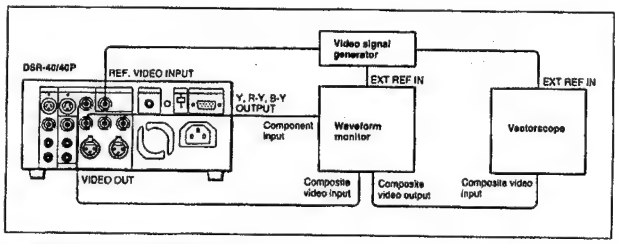
9 Output the player 2 signal from the switcher, using the PVE-500, and repeat steps 7 and 8 to adjust the sync and subcarrier phase of the output from player 2.

Adjusting Signals

You can adjust each signal level of the component output signal and the chrominance signal gain level of the composite signal.
Connect the reference video (black burst) signal one-to-one with a device that generates the reference video signal, or make a loop-through connection. If the device has a terminal switch, terminate the connection properly.
Both a waveform monitor and a vectorscope are required for adjustments.

Note

If you adjust component signal level, be sure to adjust chrominance signals gain level of composite signals.



Adjusting component signal level

1 Play back the DSR-40/40P, and output the signals from the Y, R–Y, and B–Y connectors of the OUTPUT connectors.

The picture is displayed on the waveform monitor.

2 Adjust Y signal level at the PB COMPONENT Y LEVEL menu *(See page 53)*.

3 Adjust R–Y signal level at the PB COMPONENT R–Y LEVEL menu *(See page 53)*.

4 Adjust B–Y signal level at the PB COMPONENT B–Y LEVEL menu *(See page 53)*.

Adjusting Signals

Adjusting chrominance signal gain level of the composite signal

1 Play back the DSR-40/40P, and output the signals from the VIDEO connector of the OUTPUT connector.

The picture is displayed on the vectorscope.

2 Adjust R–Y signal gain level at the COMPOSITE R–Y GAIN menu *(See page 53)*.

3 Adjust B–Y signal gain level at the COMPOSITE B–Y GAIN menu *(See page 53)*.

Using the Unit as a Recorder with FXE-100/100P/120/120P

This unit can be used as a recorder with the FXE-100/100P/120/120P. However, editing accuracy will not correspond with the RS-422A standard in the editing system.

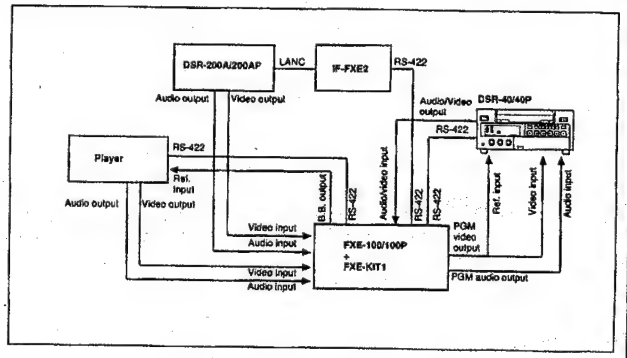
For details on usage and connections, refer to the operating manuals supplied with your devices used in a system.

Notes

When using this unit as a recorder:

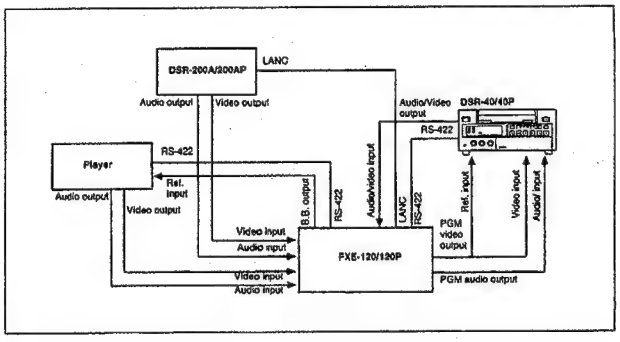
- You cannot execute video/audio insert editing.
- When you use the unit as a recorder with the FXE-120/120P, only assemble editing is available.
- Adjust the edit timing *(See page 40)*.
- Set RECORDER MODE to FXE RECORDER.
- When you use the unit as a recorder with the FXE-100/100P, the FXE-KIT1 is required for upgrading the FXE-100/100P.
- Editing accuracy is not guaranteed. If the duration is very short, the recording may not function properly.
- Be sure to execute the LEARN function. If you do not use the unit for a long time, you have to execute the function also.
- If you execute REC command via RS-422A, it delays the recording start time for about five minutes.
- Set RECORDER to OTHERS in the SETUP menu item 102 (112: when using the FXE-100/100P that has been upgraded with the FXE-KIT1) REMOTE INTERFACE of the FXE-120/120P.

When using this unit as a recorder with the FXE-100/100P (that has been upgraded with the FXE-KIT1)



Using the Unit as a Recorder with FXE-100/100P/120/120P

When using this unit as a recorder with the FXE-120/120P



Changing Menu Settings

This VCR has various functions available, and you can set and check them on the monitor screen. **Before operation, set the clock by setting the CLOCK SET menu.**
You can change the menu settings on the SET UP MENU screen.
If necessary, change the settings manually.

Changing the SET UP MENU Settings

Follow the instructions below to change the settings.

1 Press MENU.

The SET UP MENU appears on the monitor screen.

2 Press ⇧/⇩ to select the option you want to change, and press SET.

Each menu option appears on the monitor screen *(see the table below)*.

3 Press ⇧/⇩ to change the setting, and press SET.

The menu disappears from the monitor screen.
To cancel the menu settings, press MENU again.

Menu Contents

Initial settings are indicated in bold letters.

Menu options	Set this option to	Description of settings
LOCAL ENABLE	**ALL DISABLE**	• When the REMOTE/LOCAL switch is set to REMOTE, all of the tape transport control buttons (front panel/remote control unit) are disabled.
	STOP & EJECT	• When the REMOTE/LOCAL switch is set to REMOTE, only the STOP and EJECT buttons (front panel/remote control unit) are enabled.
	EJECT	• When the REMOTE/LOCAL switch is set to REMOTE, only the EJECT button (front panel) is enabled.
RS-422 CUE-UP MODE	**WITH VIDEO**	• While searching with equipment connected to the REMOTE connector, the searching picture is displayed.
	WITHOUT VIDEO	• Does not display the searching picture. (The searching speed will be faster than when set to WITH VIDEO.)

Menu Organization

Menu options	Set this option to	Description of settings
AUTO OFF	ON	• To turn off the VCR automatically if there is no operation and the tape stops for an hour (Auto Off).
	OFF	• To deactivate Auto Off.
AUTO REWIND	ON	• To rewind the tape to its beginning automatically if the tape reaches to an end (Auto Rewind).
	OFF	• To deactivate Auto Rewind.
INDEX WRITE	**AUTO**	• To record index signals when recording begins.
	OFF	• Not to record index signals.
CASSETTE MEMORY SEARCH	**AUTO**	• To search recordings with the cassette memory. If the tape does not have a cassette memory, the VCR will search recordings using index signals recorded on the tape itself.
	OFF	• To search recordings using the index signals recorded on the tape.
CASSETTE MEMORY ERASE	**ALL DATA**	• To erase all the data in the cassette memory. (When using the cassette whose memory can store over 16 Kbits of data, you can only select ALL DATA.)
	INDEX DATA	• To erase index data in the cassette memory.
	DATE DATA	• To erase date data in the cassette memory.
	PHOTO DATA	• To erase photo data in the cassette memory.
PHOTO PB	**FIELD**	• To prevent the picture from blurring when playing a tape recorded in photo mode.
	FRAME	• To see a clear picture when playing a still picture.
		Note: When selecting FRAME, a picture recorded in photo mode may be blurred.
DV EE OUT	ON	• To output the selected line input signals from the DV jack.
	OFF	• To output only playback video and audio signals from the DV jack.
DISPLAY POSITION	CENTER	• To display the tape counter in the center of the monitor screen.
	LOWER RIGHT	• To display the tape counter in the lower right of the monitor screen.
	OFF	• Not to display the tape counter.
CAUTION DISPLAY	ON	• To display alarm messages on the monitor screen.
	OFF	• Not to display alarm messages.
BEEP	ON	• To output a beep sound when an illogical operation is made.
	OFF	• To deactivate the beep.
TIME CODE (DSR-40 only)	**AUTO**	• To set the time code to the same one as already recorded on the tape.
	NDF	• To set the time code to Non Drop Frame.
	DF	• To set the time code to Drop Frame.
		Note: If you use AUTO and start recording at the beginning of the tape, the time code is set to Non Drop Frame.
PREROLL TIME SELECT	3SEC	The preroll time can be set between 3 and 10 seconds by four steps. When an editing controller such as the PVE-500 has been connected, this setting is disabled and the editing controller's setting is in effect. The preroll time setting is also performed on the editing controller.
	5SEC	
	7SEC	
	10SEC	
AFTER CUE-UP	**STOP**	• After a cue-up, the unit informs the editing unit that it is in stop mode. (The unit is actually in still mode.)
	STILL	• After a cue-up, the unit turns to still mode.
PB STILL DELAY	0FRAME – 10FRAME	Playback still delay can be set between 0 and 9 frames by 11 steps. You can set the delay which the unit turns to playback mode from still mode.
RECORDER MODE	**NORMAL PLAYER**	• To use the unit as a normal player.
	FXE RECORDER	• To use the unit as a recorder with the FXE-120/120P in a system.
STILL TIMER	8SEC – 4MIN	You can set the time which releases still or pause mode to protect the tape. Select time from 8 settings ranging from 8 seconds to 4 minutes.

Menu options	Set this option to	Description of settings
NEXT MODE FROM STILL	**STEP FWD**	• To advance the tape one frame after elapsing the set time of STILL TIMER during still mode.
	STB OFF	• To turn the unit to standby-off mode from still mode after elapsing the set time of STILL TIMER.
H PHASE COARSE[a]	—	For rough adjustment of sync phase.[b]
H PHASE FINE[a]	—	For fine adjustment of sync phase.[b]
SC 0/180[a]	0DEG – 180DEG	For rough adjustment of subcarrier phase.[b]
SC PHASE[a]	—	For fine adjustment of subcarrier phase.[b]
PB COMPONENT Y LEVEL[a]	—	Adjusts Y signal level of the component signal in the playback mode.[b]
PB COMPONENT B–Y LEVEL[a]	—	Adjusts B–Y signal level of the component signal in the playback mode.[b]
PB COMPONENT R–Y LEVEL[a]	—	Adjusts R–Y signal level of the component signal in the playback mode.[b]
COMPOSITE B–Y GAIN[a]	—	Adjusts B–Y signal gain level of the composite signal in the playback mode.[b]
COMPOSITE R–Y GAIN[a]	—	Adjusts R–Y signal gain level of the composite signal in the playback mode.[b]
AUDIO MIX BALANCE	—	If you set the AUDIO MONITOR selector to MIX, you can select the precise balance between channels 1/2 and channels 3/4 by five steps.
AUDIO MODE	Fs48k	• To set the audio mode to 2-channel mode (16bit mode). This mode uses the whole audio area to record one stereo track. You can get higher sound quality.
	Fs32k	• To set the audio mode to 4-channel mode (12bit mode). This mode separates the audio area into 2 parts. You can record two kinds of audio, stereo 1 and stereo 2. When recording on this VCR, audio signals are recorded only in channels 1/2.
JOG WITH SOUND	**ON**	• To listen to the sound when playing a tape at various speeds.
	OFF	• To turn off the sound when playing a tape at various speeds.
HOURS METER		The digital hours meter keeps cumulative counts of the head drum rotation time and the number of unthreading operations. These counts can be displayed on the monitor screen and are unresettable.
	DRUM ROTATION	• The cumulative total hours of drum rotation with tape threaded is displayed in 10-hour increments.
	THREADING	• The cumulative number of tape unthreading operation is displayed in 10-operation increments.
CLOCK SET	—	Set the clock on this VCR so that the recording time can be written into the index signal. Using ⇧/⇩ and SET buttons, set the date and time.

a) The ● mark appears on the monitor screen when the value is set to "0."
b) Adjust the value with the ⇧/⇩ buttons.

Recommended settings in the SET UP menu

Depending on the position of the REMOTE/LOCAL switch, set the menu options as follows:

Menu options	Default	REMOTE	LOCAL
LOCAL ENABLE	ALL DISABLE	Default	Default
RS-422 CUE-UP MODE	WITH VIDEO	Default	Default
AUTO OFF	OFF	OFF	ON
AUTO REWIND	ON	OFF	ON
INDEX WRITE	AUTO	Default	Default
CASSETTE MEMORY SEARCH	AUTO	Default	Default
CASSETTE MEMORY ERASE	ALL DATA	Default	Default
PHOTO PB	FIELD	Default	Default
DV EE OUT	OFF	Default	Default
DISPLAY POSITION	LOWER RIGHT	Default	Default
CAUTION DISPLAY	ON	Default	Default
BEEP	ON	Default	Default
TIME CODE (Only for DSR-40)	AUTO	Default	Default
PREROLL TIME SELECT	7 SEC	Default	Default
AFTER CUE-UP	STOP	Depending on editing unit	Default
PB STILL DELAY	0 FRAME	Default	Default
RECORDER MODE	NORMAL PLAYER	Depending on editing unit	Default
STILL TIMER	8 SEC	Default	Default
NEXT MODE FROM STILL	STB OFF	Default	Default
H PHASE COARSE	–	Depending on editing system	Default
H PHASE FINE	–	Depending on editing system	Default
SC 0/180	0 DEG	Depending on editing system	Default
SC PHASE	–	Depending on editing system	Default
PB COMPONENT Y LEVEL	–	Depending on editing system	Default
PB COMPONENT B-Y LEVEL	–	Depending on editing system	Default
PB COMPONENT R-Y LEVEL	–	Depending on editing system	Default
COMPOSITE B-Y GAIN	–	Depending on editing system	Default
COMPOSITE R-Y GAIN	–	Depending on editing system	Default
AUDIO MIX BALANCE	–	Default	Default
AUDIO MODE	Fs48k	Default	Default
JOG WITH SOUND	ON	ON	OFF

- **Default:** Set the menu option to be suitable for your usage; you can use with the default setting.
- **Depending on editing unit:** Set the menu option to be suitable for your unit.
- **Depending on editing system:** Set the menu option to be suitable for your system.

Alarm Messages

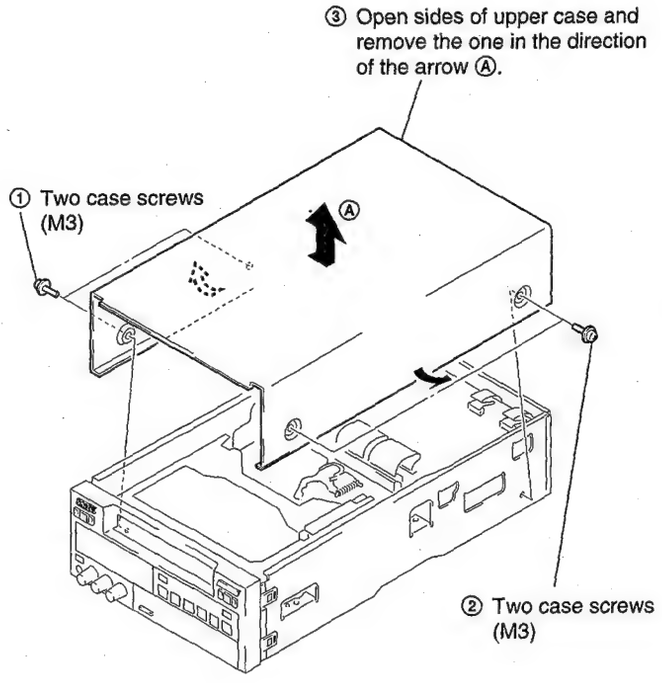
Various messages appear on the monitor screen ("Er" appears in the display window). Check them with the following list.

Message	Meaning / Remedy
PLEASE CONFIRM THE SAFETY SWITCH OF THE CASSETTE	Check that the protect tab is slid in so that the red portion visible. → Slide back the safety switch *(see page 6)*.
NO CASSETTE MEMORY	You try to erase cassette memory when there is no cassette memory.
VCR IS RECORDING	You press a certain operation button during recording or editing.
PLEASE INSERT A NEW CASSETTE	Though no cassette is inserted in the cassette compartment, you press PLAY, etc. → Insert a cassette.
THE TAPE IS REWOUND	You press REW at the beginning of the tape.
PLEASE REWIND OR INSERT A NEW CASSETTE	You try to start playback or recording at the tape end. → Rewind the tape or insert a new cassette.
PLEASE SET THE CLOCK	When turning on the power, the clock has not been set. → Set the clock in the menu *(see page 53)*.
THIS PROGRAM IS COPYRIGHT PROTECTED	You try to dub the tape on which copyright protect signals are recorded.
CASSETTE MEMORY IS TOO LARGE TO ERASE	You try to erase data on a tape having more than 18 Kbits memory capacity in INDEX DATA, DATE DATA, or PHOTO DATA mode. → Erase it in ALL DATA mode *(see page 52)*.
WRITING ON CASSETTE MEMORY. PLEASE WAIT	You do certain operation while the VCR is writing on cassette memory. → Operate after writing on cassette memory is complete.
VCR IS IN DUP MODE	You press a certain operation button during duplication.

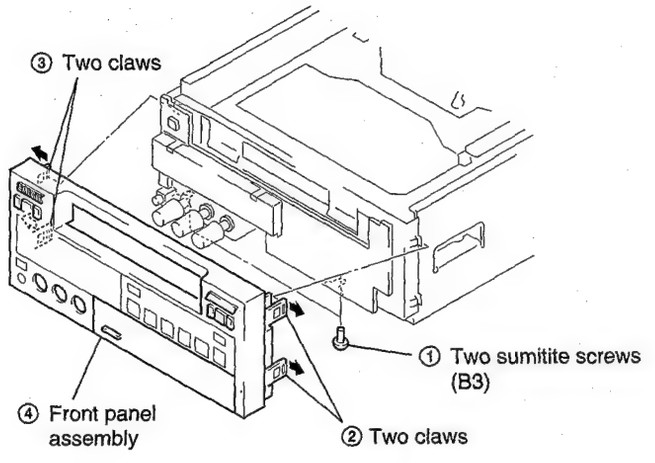
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

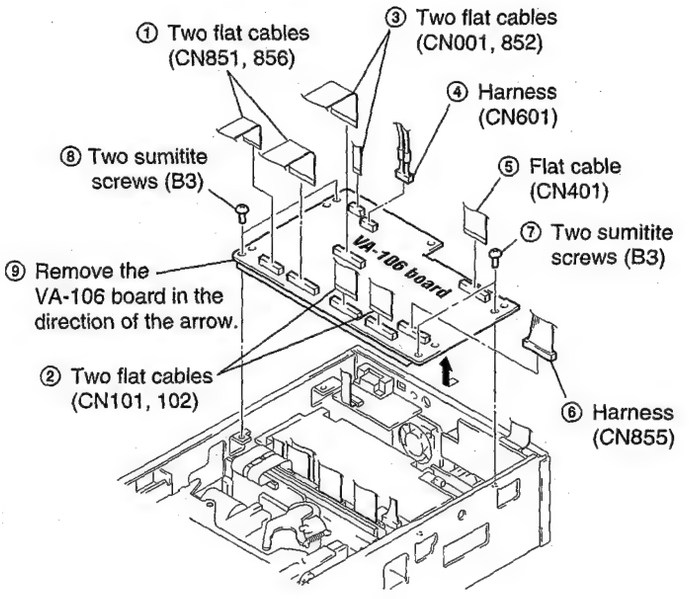
2-1. REMOVAL OF UPPER CASE



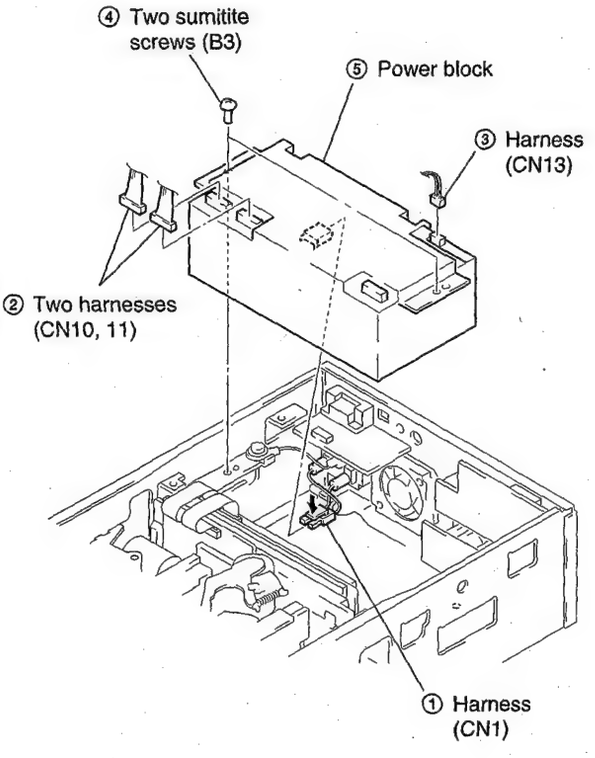
2-2. REMOVAL OF FRONT PANEL ASSEMBLY



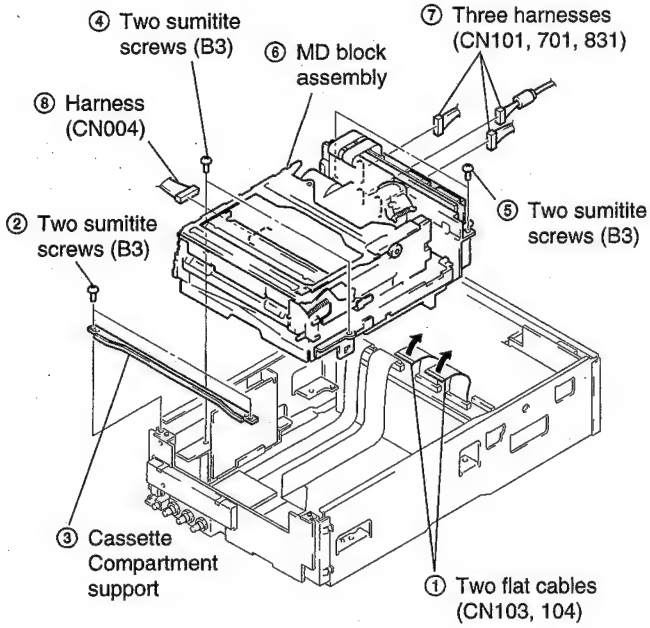
2-3. REMOVAL OF VA-106 BOARD



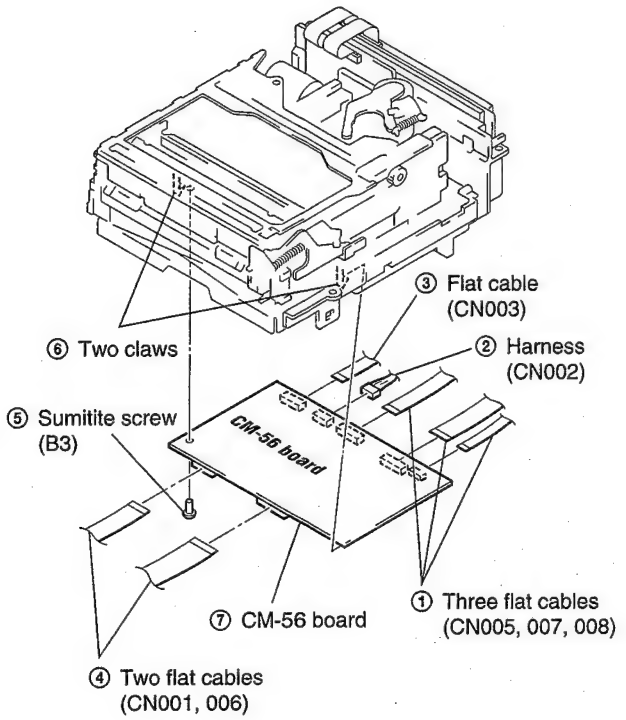
2-4. REMOVAL OF POWER BLOCK



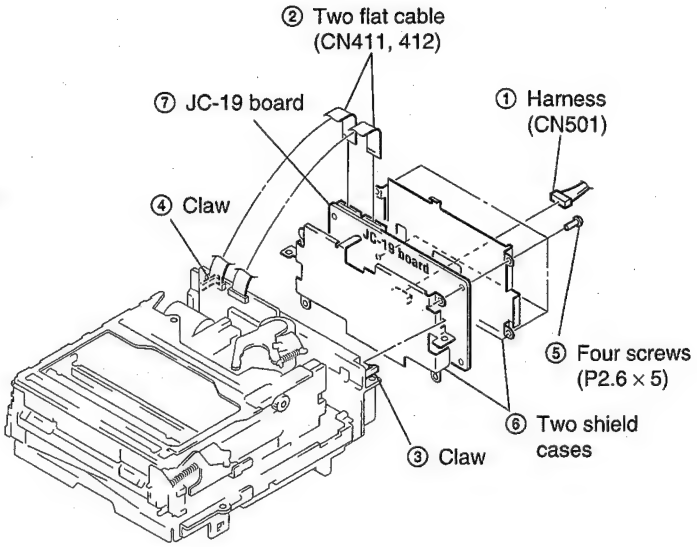
2-5. REMOVAL OF MD BLOCK ASSEMBLY



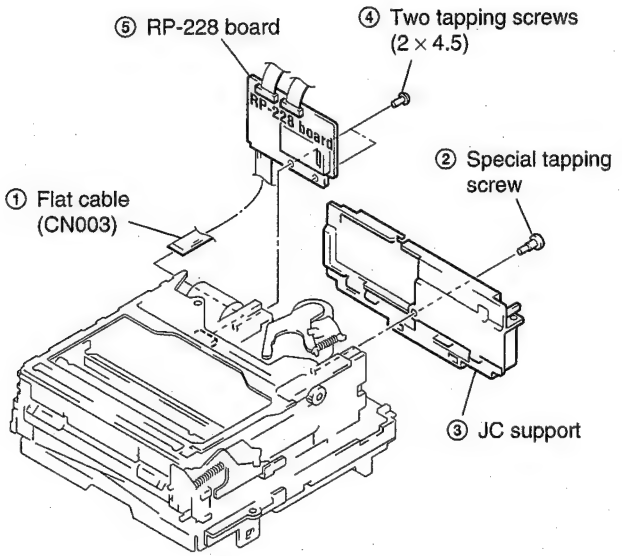
2-6. REMOVAL OF CM-56 BOARD



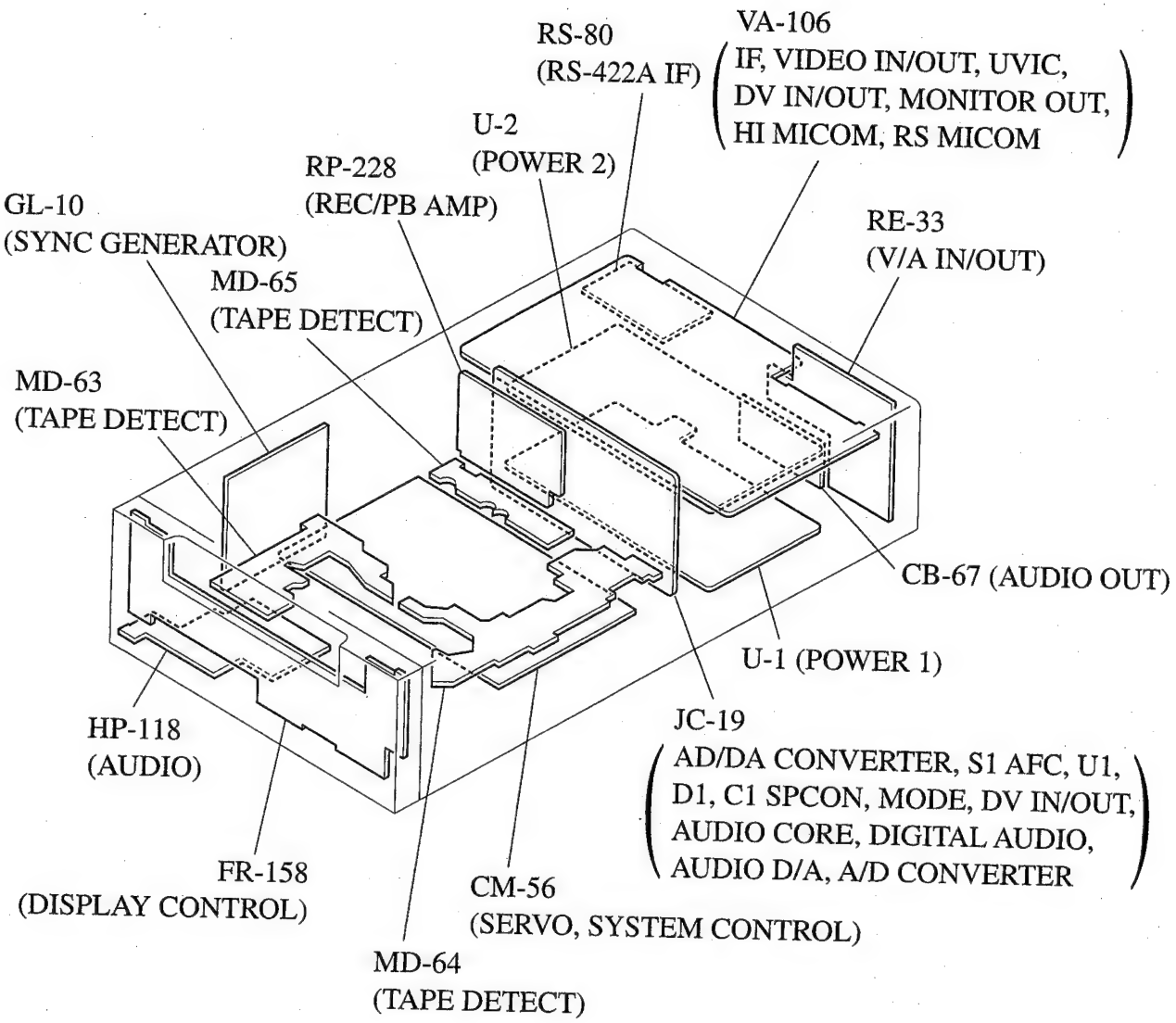
2-7. REMOVAL OF JC-19 BOARD

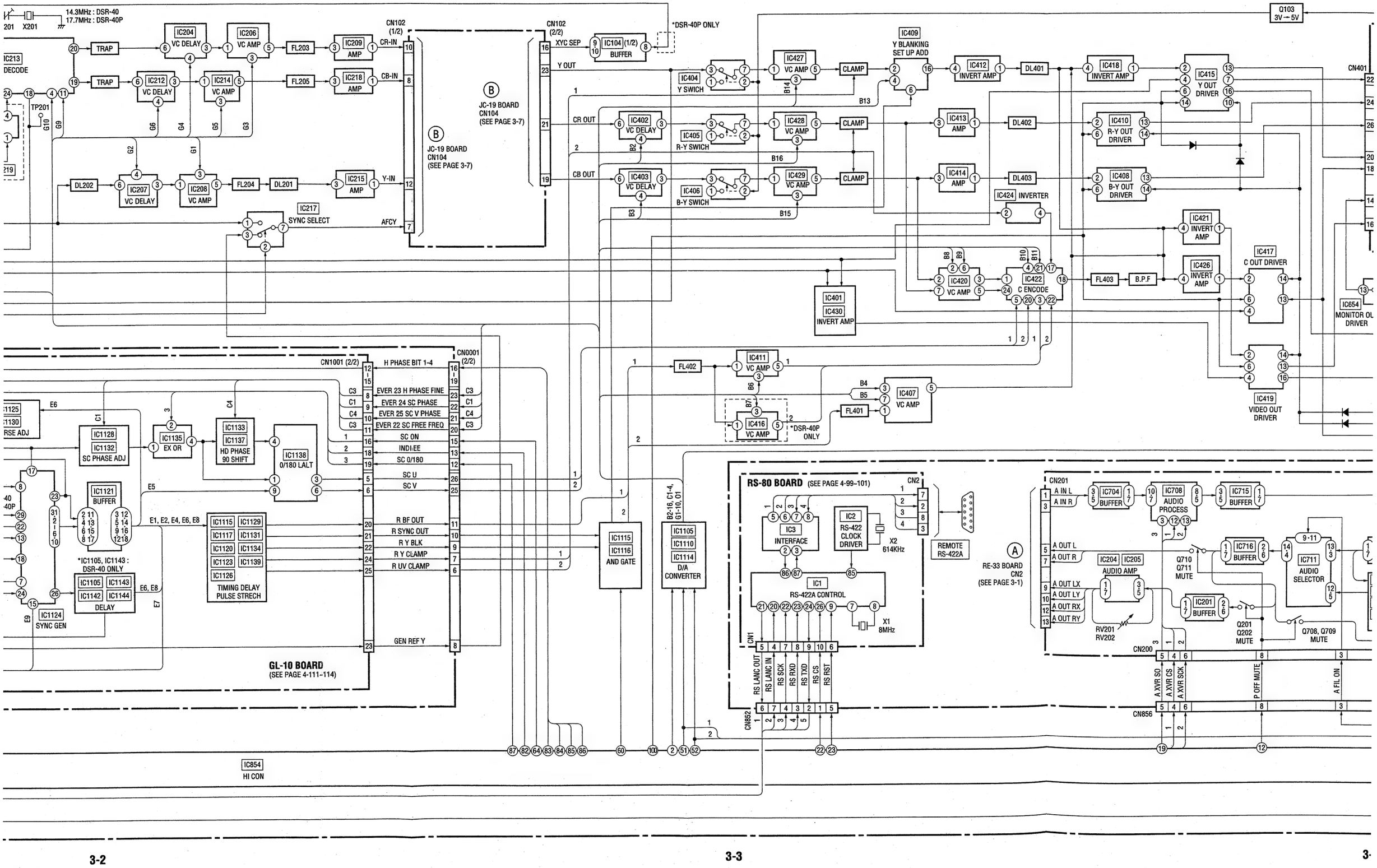


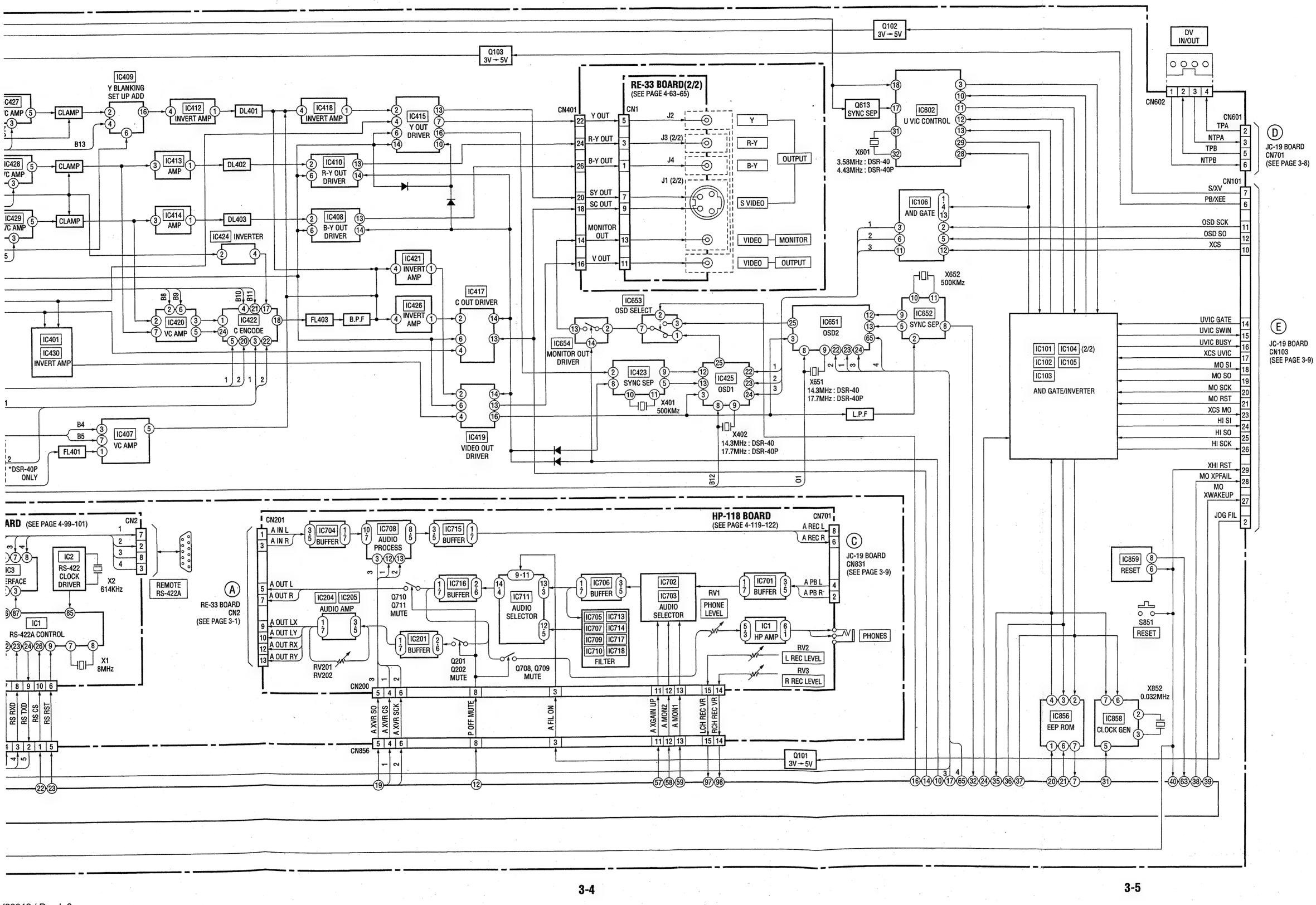
2-8. REMOVAL OF RP-228 BOARD



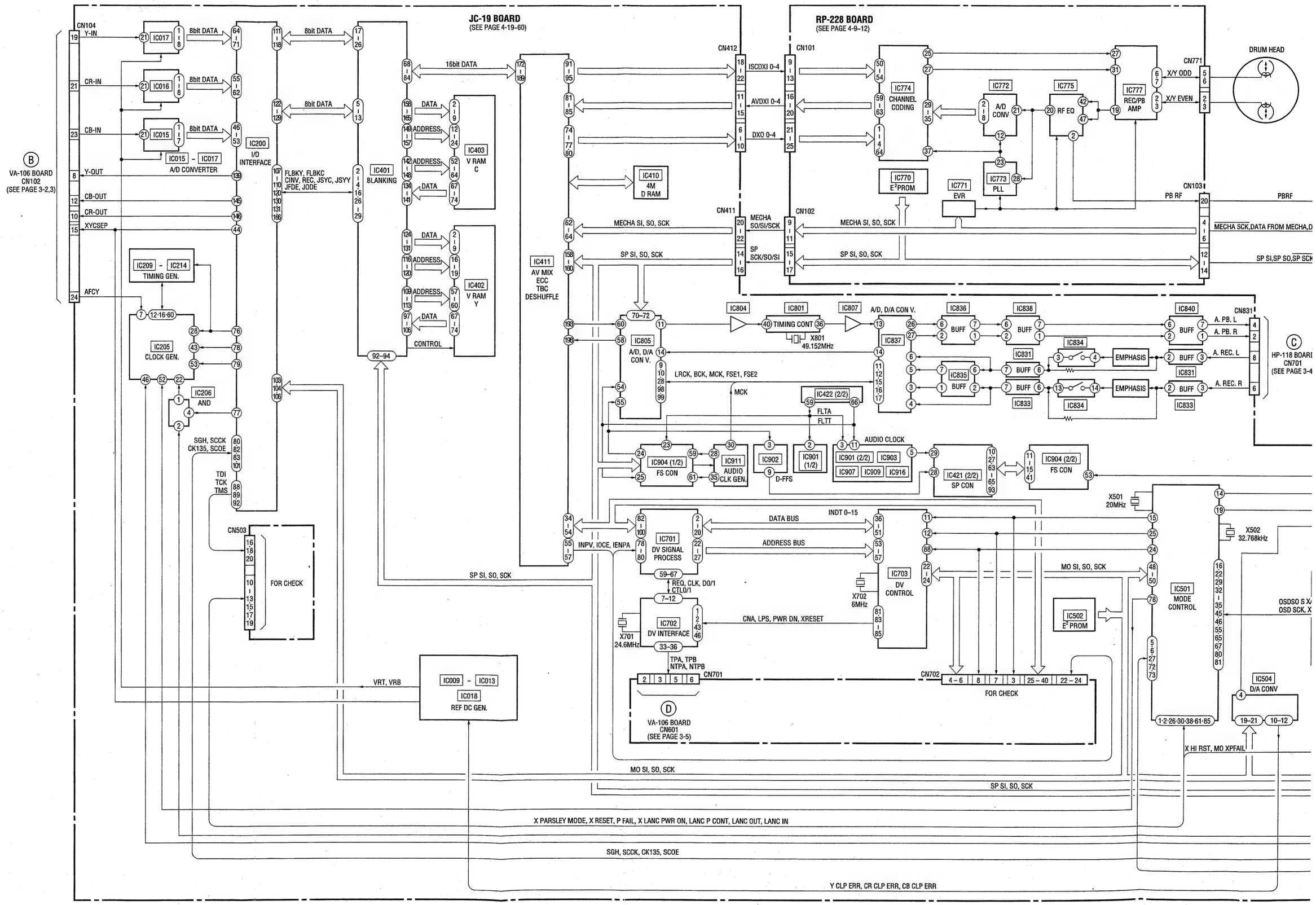
2-9. CIRCUIT BOARDS LOCATION

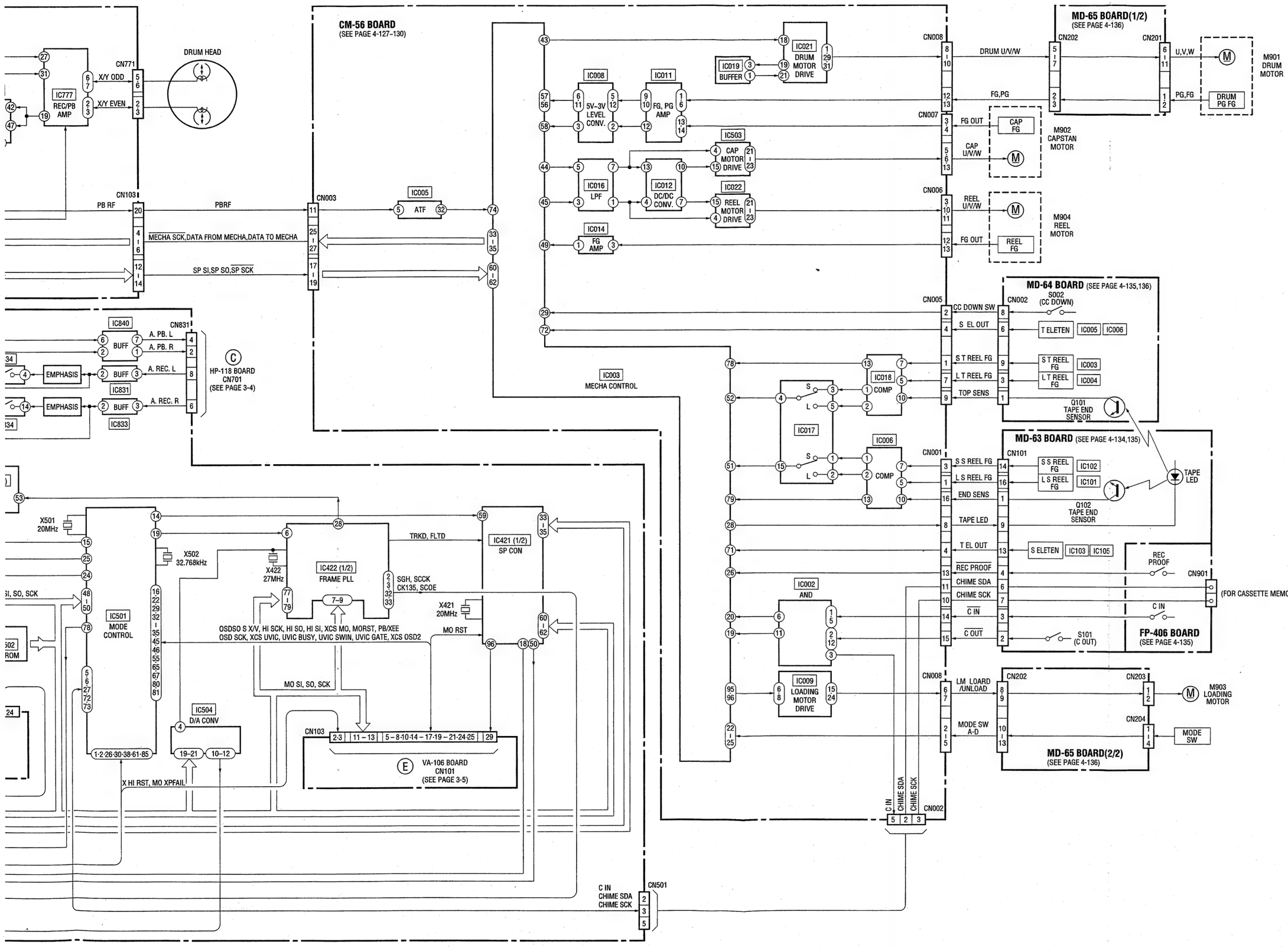



14.3MHz : DSR-40
17.7MHz : DSR-40P
X201
TRAP
IC204 VC DELAY
IC206 VC AMP
FL203
IC209 AMP
CR-IN
IC212 VC DELAY
IC214 VC AMP
FL205
IC218 AMP
CB-IN
DL202
IC207 VC DELAY
IC208 VC AMP
FL204
DL201
IC215 AMP
Y-IN
IC217 SYNC SELECT
AFCY
CN102 (1/2)
CN102 (2/2)
XYC SEP
IC104 (1/2) BUFFER
*DSR-40P ONLY
Y OUT
CR OUT
CB OUT
B JC-19 BOARD CN104 (SEE PAGE 3-7)
IC404 Y SWICH
IC405 R-Y SWICH
IC406 B-Y SWICH
IC402 VC DELAY
IC403 VC DELAY
IC427 VC AMP
IC428 VC AMP
IC429 VC AMP
CLAMP
IC409 Y BLANKING SET UP ADD
IC412 INVERT AMP
IC413 AMP
IC414 AMP
DL401
DL402
DL403
IC424 INVERTER
IC418 INVERT AMP
IC415 Y OUT DRIVER
IC410 R-Y OUT DRIVER
IC408 B-Y OUT DRIVER
IC421 INVERT AMP
IC426 INVERT AMP
IC417 C OUT DRIVER
IC654 MONITOR OUT DRIVER
Q103 3V → 5V
CN401
IC401 IC430 INVERT AMP
IC420 VC AMP
IC422 C ENCODE
FL403
B.P.F
IC411 VC AMP
IC416 VC AMP
FL402
FL401
IC407 VC AMP
*DSR-40P ONLY
IC419 VIDEO OUT DRIVER
IC213 DECODE
TP201
DL202
IC1125
IC1130
RSE ADJ
IC1128 IC1132 SC PHASE ADJ
IC1135 EX OR
IC1133 IC1137 HD PHASE 90 SHIFT
IC1138 0/180 LALT
IC1121 BUFFER
IC1105, IC1143 : DSR-40 ONLY
IC1105 IC1143 IC1142 IC1144 DELAY
IC1124 SYNC GEN
IC1115 IC1129 IC1117 IC1131 IC1120 IC1134 IC1123 IC1139 IC1126 TIMING DELAY PULSE STRECH
CN1001 (2/2)
CN0001 (2/2)
H PHASE BIT 1-4
EVER 23 H PHASE FINE
EVER 24 SC PHASE
EVER 25 SC V PHASE
EVER 22 SC FREE FREQ
SC ON
INDI.EE
SC 0/180
SC U
SC V
R BF OUT
R SYNC OUT
R Y BLK
R Y CLAMP
R UV CLAMP
GEN REF Y
GL-10 BOARD (SEE PAGE 4-111~114)
IC1115 IC1116 AND GATE
IC1105 IC1110 IC1114 D/A CONVERTER
IC854 HI CON
RS-80 BOARD (SEE PAGE 4-99~101)
CN2
IC3 INTERFACE
IC2 RS-422 CLOCK DRIVER
X2 614KHz
REMOTE RS-422A
IC1 RS-422A CONTROL
X1 8MHz
CN1
CN862
RS LANC OUT
RS LANC IN
RS SCK
RS RXD
RS TXD
RS CS
RS RST
A RE-33 BOARD CN2 (SEE PAGE 3-1)
CN201
A IN L
A IN R
IC704 BUFFER
IC708 AUDIO PROCESS
IC715 BUFFER
A OUT L
A OUT R
IC204 IC205 AUDIO AMP
IC716 BUFFER
Q710 Q711 MUTE
IC711 AUDIO SELECTOR
A OUT LX
A OUT LY
A OUT RX
A OUT RY
IC201 BUFFER
RV201 RV202
Q201 Q202 MUTE
Q708, Q709 MUTE
CN200
CN856
A XVR SO
A XVR CS
A XVR SCK
P OFF MUTE
A FIL ON

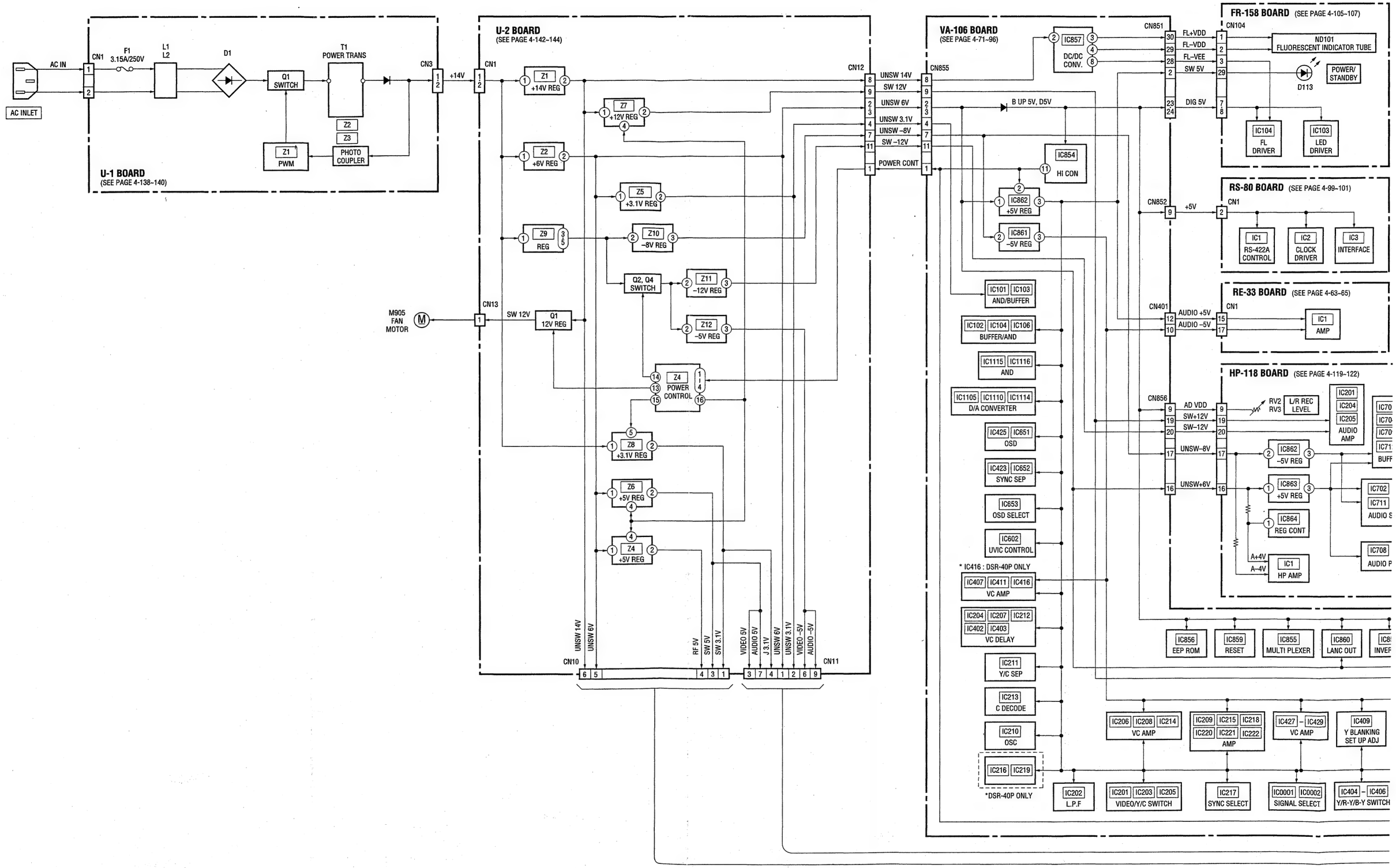

Q102 3V → 5V
Q103 3V → 5V
DV IN/OUT
CN602
CN601
TPA
NTPA
TPB
NTPB
D
JC-19 BOARD CN701 (SEE PAGE 3-8)
CN101
S/XV
PB/XEE
OSD SCK
OSD SO
XCS
UVIC GATE
UVIC SWIN
UVIC BUSY
XCS UVIC
MO SI
MO SO
MO SCK
MO RST
XCS MO
HI SI
HI SO
HI SCK
XHI RST
MO XPFAIL
MO XWAKEUP
JOG FIL
E
JC-19 BOARD CN103 (SEE PAGE 3-9)
IC409 Y BLANKING SET UP ADD
IC412 INVERT AMP
IC418 INVERT AMP
IC415 Y OUT DRIVER
IC413 AMP
IC410 R-Y OUT DRIVER
IC414 AMP
IC408 B-Y OUT DRIVER
IC424 INVERTER
IC421 INVERT AMP
IC426 INVERT AMP
IC417 C OUT DRIVER
IC419 VIDEO OUT DRIVER
IC420 VC AMP
IC422 C ENCODE
FL403
B.P.F
IC401
IC430 INVERT AMP
IC407 VC AMP
FL401
*DSR-40P ONLY
RE-33 BOARD(2/2) (SEE PAGE 4-63-65)
CN401
CN1
Y OUT
R-Y OUT
B-Y OUT
SY OUT
SC OUT
MONITOR OUT
V OUT
J2
J3 (2/2)
J4
J1 (2/2)
Y
R-Y
B-Y
OUTPUT
S VIDEO
VIDEO
MONITOR
VIDEO
OUTPUT
Q613 SYNC SEP
IC602 U VIC CONTROL
X601 3.58MHz : DSR-40 4.43MHz : DSR-40P
IC106 AND GATE
X652 500KMz
IC652 SYNC SEP
IC653 OSD SELECT
IC654 MONITOR OUT DRIVER
IC651 OSD2
X651 14.3MHz : DSR-40 17.7MHz : DSR-40P
IC423 SYNC SEP
X401 500KMz
IC425 OSD1
X402 14.3MHz : DSR-40 17.7MHz : DSR-40P
L.P.F
IC101 IC104 (2/2)
IC102 IC105
IC103
AND GATE/INVERTER
IC859 RESET
S851 RESET
IC856 EEP ROM
IC858 CLOCK GEN
X852 0.032MHz
IC1 RS-422A CONTROL
IC2 RS-422 CLOCK DRIVER
X1 8MHz
X2 614KHz
RS RXD
RS TXD
RS CS
RS RST
REMOTE RS-422A
A
RE-33 BOARD CN2 (SEE PAGE 3-1)
CN2
(SEE PAGE 4-99-101)
HP-118 BOARD (SEE PAGE 4-119-122)
CN701
A REC L
A REC R
C
JC-19 BOARD CN831 (SEE PAGE 3-9)
CN201
A IN L
A IN R
A OUT L
A OUT R
A OUT LX
A OUT LY
A OUT RX
A OUT RY
IC704 BUFFER
IC708 AUDIO PROCESS
IC715 BUFFER
IC716 BUFFER
IC711 AUDIO SELECTOR
IC706 BUFFER
IC702
IC703 AUDIO SELECTOR
IC701 BUFFER
IC204 IC205 AUDIO AMP
IC201 BUFFER
Q710 Q711 MUTE
Q201 Q202 MUTE
Q708, Q709 MUTE
RV201 RV202
RV1 PHONE LEVEL
IC705 IC713
IC707 IC714
IC709 IC717
IC710 IC718
FILTER
IC1 HP AMP
RV2 L REC LEVEL
RV3 R REC LEVEL
PHONES
CN200
CN856
A XVR SO
A XVR CS
A XVR SCK
P OFF MUTE
A FIL ON
A XGAIN UP
A MON2
A MON1
LCH REC VR
RCH REC VR
Q101 3V → 5V

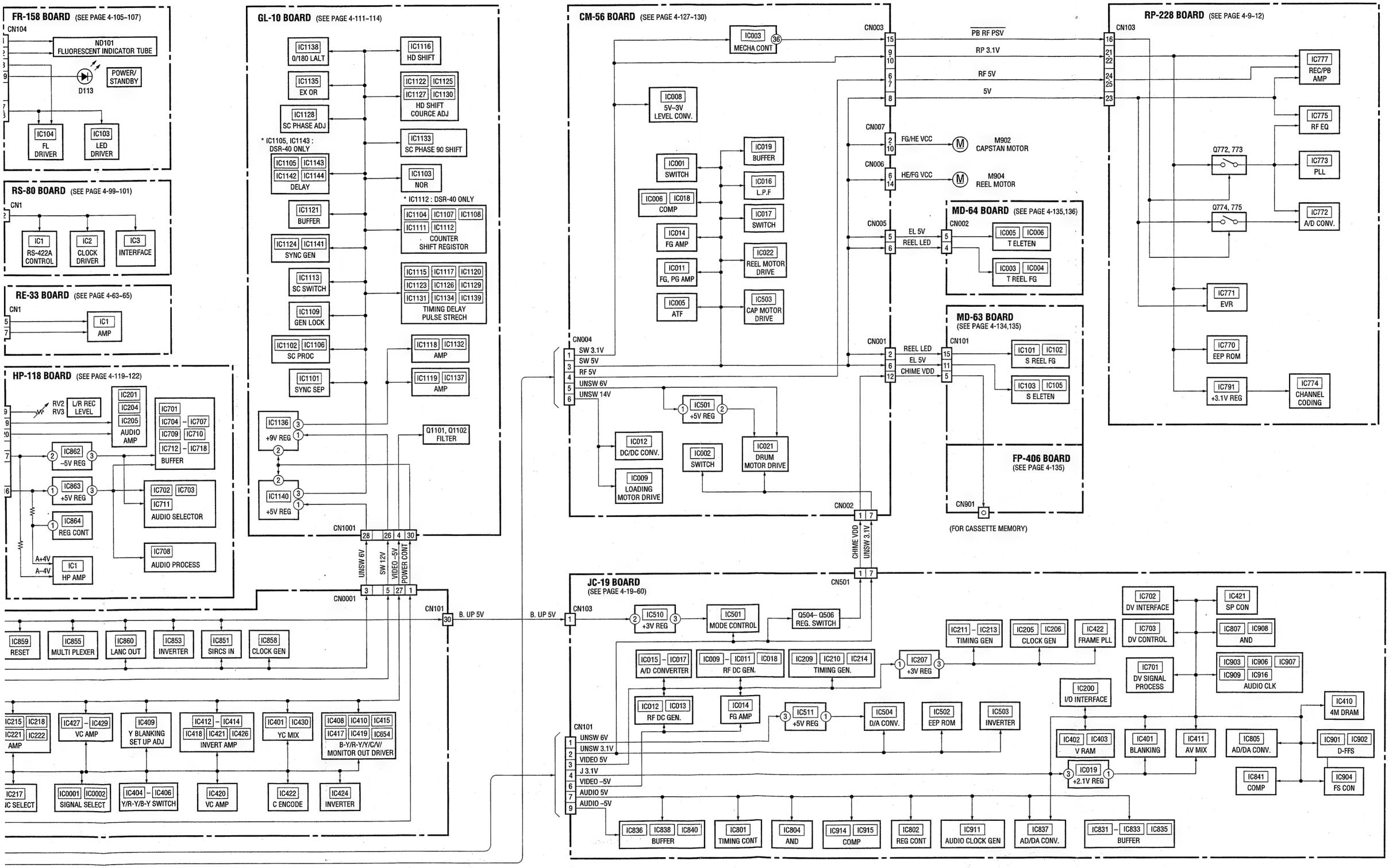
3-2. OVERALL BLOCK DIAGRAM 2




CM-56 BOARD
(SEE PAGE 4-127~130)
DRUM HEAD
CN771
X/Y ODD
X/Y EVEN
IC777
REC/PB AMP
CN103
PB RF
PBRF
MECHA SCK,DATA FROM MECHA,DATA TO MECHA
SP SI,SP SO,SP SCK
CN003
IC005
ATF
IC840
BUFF
A. PB. L
A. PB. R
A. REC. L
A. REC. R
EMPHASIS
IC831
IC833
CN831
C
HP-118 BOARD
CN701
(SEE PAGE 3-4)
IC003
MECHA CONTROL
IC008
5V~3V LEVEL CONV.
IC011
FG, PG AMP
IC016
LPF
IC012
DC/DC CONV.
IC014
FG AMP
IC019
BUFFER
IC021
DRUM MOTOR DRIVE
IC503
CAP MOTOR DRIVE
IC022
REEL MOTOR DRIVE
CN008
DRUM U/V/W
FG,PG
CN007
FG OUT
CAP FG
CAP U/V/W
M902
CAPSTAN MOTOR
CN006
REEL U/V/W
FG OUT
REEL FG
M904
REEL MOTOR
MD-65 BOARD(1/2)
(SEE PAGE 4-136)
CN202
CN201
U,V,W
PG,FG
DRUM PG FG
M901
DRUM MOTOR
MD-64 BOARD (SEE PAGE 4-135,136)
S002
(CC DOWN)
CN002
CN005
CC DOWN SW
S EL OUT
S T REEL FG
L T REEL FG
TOP SENS
T ELETEN
IC005
IC006
S T REEL FG
IC003
L T REEL FG
IC004
Q101
TAPE END SENSOR
IC018
COMP
IC017
IC006
COMP
MD-63 BOARD (SEE PAGE 4-134,135)
CN101
CN001
S S REEL FG
L S REEL FG
END SENS
TAPE LED
T EL OUT
REC PROOF
CHIME SDA
CHIME SCK
C IN
C OUT
S S REEL FG
IC102
L S REEL FG
IC101
TAPE LED
Q102
TAPE END SENSOR
S ELETEN
IC103
IC105
REC PROOF
CN901
(FOR CASSETTE MEMORY)
C IN
S101
(C OUT)
FP-406 BOARD
(SEE PAGE 4-135)
IC002
AND
IC009
LOADING MOTOR DRIVE
CN008
LM LOARD /UNLOAD
MODE SW A-D
CN202
CN203
M903
LOADING MOTOR
CN204
MODE SW
MD-65 BOARD(2/2)
(SEE PAGE 4-136)
C IN
CHIME SDA
CHIME SCK
CN002
IC501
MODE CONTROL
X501
20MHz
X502
32.768kHz
X422
27MHz
IC422 (1/2)
FRAME PLL
TRKD, FLTD
IC421 (1/2)
SP CON
SGH, SCCK
CK135, SCOE
X421
20MHz
MO RST
OSDSO S X/V, HI SCK, HI SO, HI SI, XCS MO, MORST, PB/XEE
OSD SCK, XCS UVIC, UVIC BUSY, UVIC SWIN, UVIC GATE, XCS OSD2
MO SI, SO, SCK
IC504
D/A CONV
X HI RST, MO XPFAIL
CN103
VA-106 BOARD
CN101
(SEE PAGE 3-5)
E
CN501
C IN
CHIME SDA
CHIME SCK

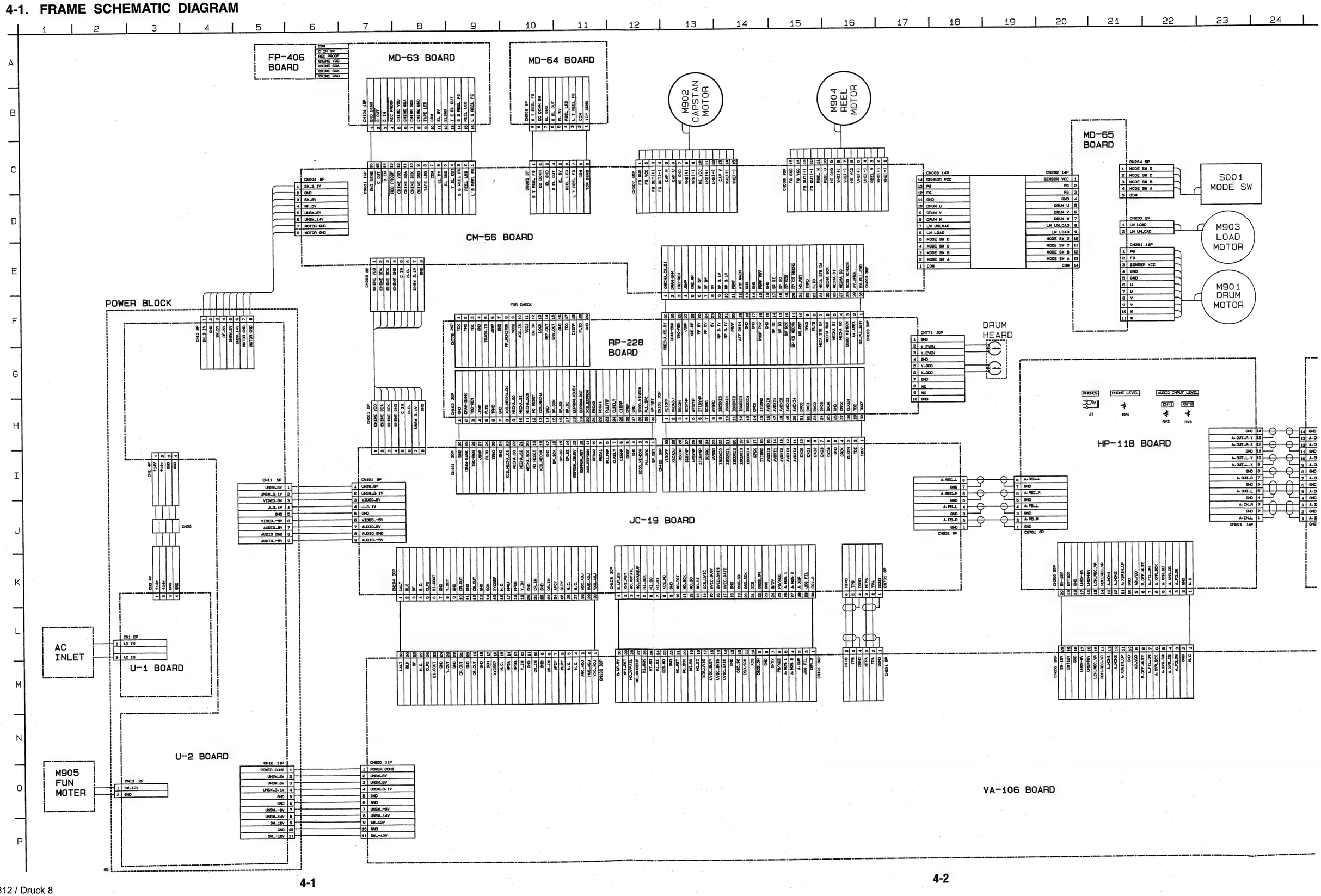
3-3. OVERALL BLOCK DIAGRAM 3

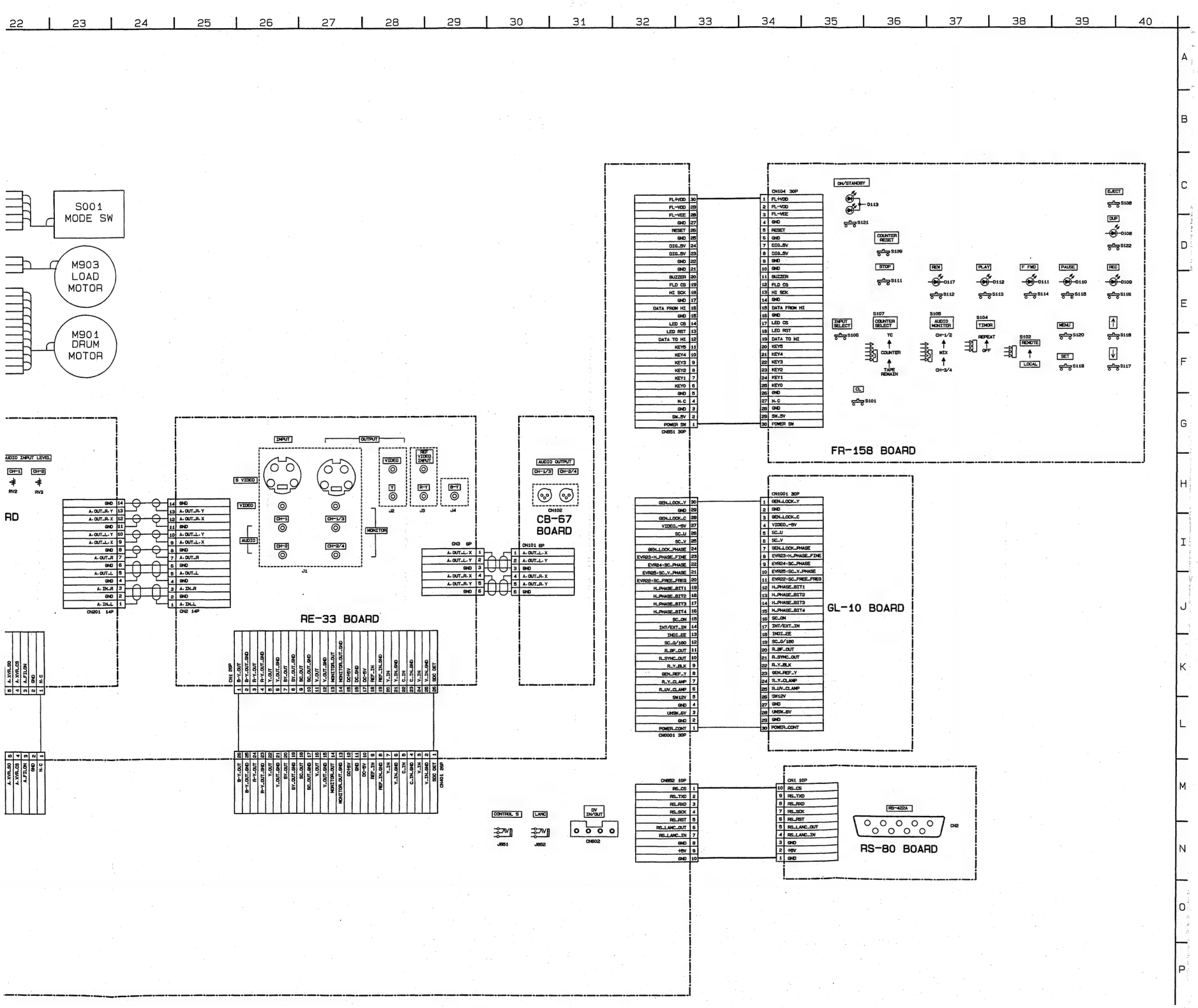



FR-158 BOARD (SEE PAGE 4-105~107)
CN104
ND101 FLUORESCENT INDICATOR TUBE
POWER/ STANDBY
D113
IC104 FL DRIVER
IC103 LED DRIVER
RS-80 BOARD (SEE PAGE 4-99~101)
CN1
IC1 RS-422A CONTROL
IC2 CLOCK DRIVER
IC3 INTERFACE
RE-33 BOARD (SEE PAGE 4-63~65)
CN1
IC1 AMP
HP-118 BOARD (SEE PAGE 4-119~122)
RV2 L/R REC LEVEL
RV3
IC201 IC204 IC205 AUDIO AMP
IC862 -5V REG
IC863 +5V REG
IC864 REG CONT
A+4V
A-4V
IC1 HP AMP
IC701 IC704 - IC707 IC709 IC710 IC712 - IC718 BUFFER
IC702 IC703 IC711 AUDIO SELECTOR
IC708 AUDIO PROCESS
GL-10 BOARD (SEE PAGE 4-111~114)
IC1138 0/180 LALT
IC1135 EX OR
IC1128 SC PHASE ADJ
* IC1105, IC1143 : DSR-40 ONLY
IC1105 IC1143 IC1142 IC1144 DELAY
IC1121 BUFFER
IC1124 IC1141 SYNC GEN
IC1113 SC SWITCH
IC1109 GEN LOCK
IC1102 IC1106 SC PROC
IC1101 SYNC SEP
IC1136 +9V REG
IC1140 +5V REG
IC1116 HD SHIFT
IC1122 IC1125 IC1127 IC1130 HD SHIFT COURCE ADJ
IC1133 SC PHASE 90 SHIFT
IC1103 NOR
* IC1112 : DSR-40 ONLY
IC1104 IC1107 IC1108 IC1111 IC1112 COUNTER SHIFT REGISTOR
IC1115 IC1117 IC1120 IC1123 IC1126 IC1129 IC1131 IC1134 IC1139 TIMING DELAY PULSE STRECH
IC1118 IC1132 AMP
IC1119 IC1137 AMP
Q1101, Q1102 FILTER
CN1001
28 26 4 30
UNSW 6V
SW 12V
VIDEO -5V
POWER CONT
CN0001
3 5 27 1
CN101
30
B. UP 5V
IC859 RESET
IC855 MULTI PLEXER
IC860 LANC OUT
IC853 INVERTER
IC851 SIRCS IN
IC858 CLOCK GEN
IC215 IC218 IC221 IC222 AMP
IC427 - IC429 VC AMP
IC409 Y BLANKING SET UP ADJ
IC412 - IC414 IC418 IC421 IC426 INVERT AMP
IC401 IC430 YC MIX
IC408 IC410 IC415 IC417 IC419 IC654 B-Y/R-Y/Y/C/// MONITOR OUT DRIVER
IC217 IC SELECT
IC0001 IC0002 SIGNAL SELECT
IC404 - IC406 Y/R-Y/B-Y SWITCH
IC420 VC AMP
IC422 C ENCODE
IC424 INVERTER
CM-56 BOARD (SEE PAGE 4-127~130)
IC003 MECHA CONT
IC008 5V-3V LEVEL CONV.
IC001 SWITCH
IC006 IC018 COMP
IC014 FG AMP
IC011 FG, PG AMP
IC005 ATF
IC019 BUFFER
IC016 L.P.F
IC017 SWITCH
IC022 REEL MOTOR DRIVE
IC503 CAP MOTOR DRIVE
CN004
SW 3.1V
SW 5V
RF 5V
UNSW 6V
UNSW 14V
IC501 +5V REG
IC012 DC/DC CONV.
IC009 LOADING MOTOR DRIVE
IC002 SWITCH
IC021 DRUM MOTOR DRIVE
CN003
PB RF PSV
RP 3.1V
RF 5V
5V
CN007
FG/HE VCC
M902 CAPSTAN MOTOR
CN006
HE/FG VCC
M904 REEL MOTOR
CN005
EL 5V
REEL LED
CHIME VDD
CN002
CN001
REEL LED
EL 5V
CHIME VDD
MD-64 BOARD (SEE PAGE 4-135,136)
CN002
IC005 IC006 T ELETEN
IC003 IC004 T REEL FG
MD-63 BOARD (SEE PAGE 4-134,135)
CN101
IC101 IC102 S REEL FG
IC103 IC105 S ELETEN
FP-406 BOARD (SEE PAGE 4-135)
CN901
(FOR CASSETTE MEMORY)
CHIME VDD
UNSW 3.1V
CN501
RP-228 BOARD (SEE PAGE 4-9~12)
CN103
IC777 REC/PB AMP
IC775 RF EQ
Q772, 773
IC773 PLL
Q774, 775
IC772 A/D CONV.
IC771 EVR
IC770 EEP ROM
IC791 +3.1V REG
IC774 CHANNEL CODING
JC-19 BOARD (SEE PAGE 4-19~60)
CN103
IC510 +3V REG
IC501 MODE CONTROL
Q504~ Q506 REG. SWITCH
IC015 - IC017 A/D CONVERTER
IC009 - IC011 IC018 RF DC GEN.
IC209 IC210 IC214 TIMING GEN.
IC207 +3V REG
IC012 IC013 RF DC GEN.
IC014 FG AMP
IC511 +5V REG
IC504 D/A CONV.
IC502 EEP ROM
IC503 INVERTER
CN101
UNSW 6V
UNSW 3.1V
VIDEO 5V
J 3.1V
VIDEO -5V
AUDIO 5V
AUDIO -5V
IC836 IC838 IC840 BUFFER
IC801 TIMING CONT
IC804 AND
IC914 IC915 COMP
IC802 REG CONT
IC911 AUDIO CLOCK GEN
IC837 AD/DA CONV.
IC831 - IC833 IC835 BUFFER
IC211 - IC213 TIMING GEN
IC205 IC206 CLOCK GEN
IC422 FRAME PLL
IC200 I/O INTERFACE
IC402 IC403 V RAM
IC401 BLANKING
IC411 AV MIX
IC805 AD/DA CONV.
IC841 COMP
IC019 +2.1V REG
IC702 DV INTERFACE
IC703 DV CONTROL
IC701 DV SIGNAL PROCESS
IC421 SP CON
IC807 IC908 AND
IC903 IC906 IC907 IC909 IC916 AUDIO CLK
IC410 4M DRAM
IC901 IC902 D-FFS
IC904 FS CON

SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAM




22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
A B C D E F G H I J K L M N O P
S001 MODE SW
M903 LOAD MOTOR
M901 DRUM MOTOR
AUDIO INPUT LEVEL
CH-1
CH-2
RV2
RV3
RD
CN201 14P
CN2 14P
RE-33 BOARD
CN4 20P
INPUT
OUTPUT
S VIDEO
VIDEO
AUDIO
MONITOR
J1
J2
J3
J4
CH-1/3
CH-2/4
AUDIO OUTPUT
CN102
C8-67 BOARD
CN3 6P
CN101 6P
CN104 30P
FR-158 BOARD
ON/STANDBY
EJECT
DUP
REC
COUNTER RESET
STOP
REW
PLAY
F FWD
PAUSE
INPUT SELECT
COUNTER SELECT
AUDIO MONITOR
TIMER
REMOTE
MENU
SET
LOCAL
CL
CN1001 30P
GL-10 BOARD
CN802 10P
CN1 10P
RS-422A
CN2
RS-80 BOARD
CONTROL S
LANC
DV IN/OUT
J851
J852
CN802

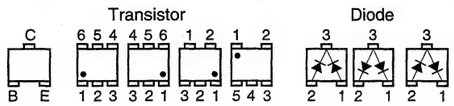
FRAME

4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block)

For printed wiring boards:

- ▒▒▒ : Pattern from the side which enables seeing. (The other layers' pattern are not indicated)
- Circled numbers refer to waveforms.
- Through hole is omitted.
- There are few cases that the part printed on diagram isn't mounted in this model.
- Chip parts.



For schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF : μμF 50V or less are not indicated except for electrolytics and tantalums.
- Chip resistors are 1/10 W unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ.
- Caution when replacing chip parts. New parts must be attached after removal of chip. Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- Some chip part will be indicated as follows.

Example: C 541 22U TA A — Kinds of capacitor / Temperature characteristics; L 452 10UH 2520 — External dimensions (mm)

- Constants of resistors, capasitors, ICs and etc with XX indicate that they are not used. In such cases, the unused circuits may be indicated.
- Parts with ★ differ according to the model/destination. Refer to the mount table for each function.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
  XEDIT → $\overline{\text{EDIT}}$ PB/XREC → PB/$\overline{\text{REC}}$
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.
- : B+ Line.*
- : B– Line.*
- : IN/OUT direction of B line (+, –).*
- : adjustment for repair.*
- Circled numbers refer to waveforms.*

Measuring conditions voltege and waveform:

- Voltages and waveforms are measured between the measurement points and graound when color bar signal input.They are reference values and reference waveforms.* (VOM of DC 10 M Ω input impedance is used)
- Voltage values change depending upon input impedance of VOM used.

* Indicated by the color red.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

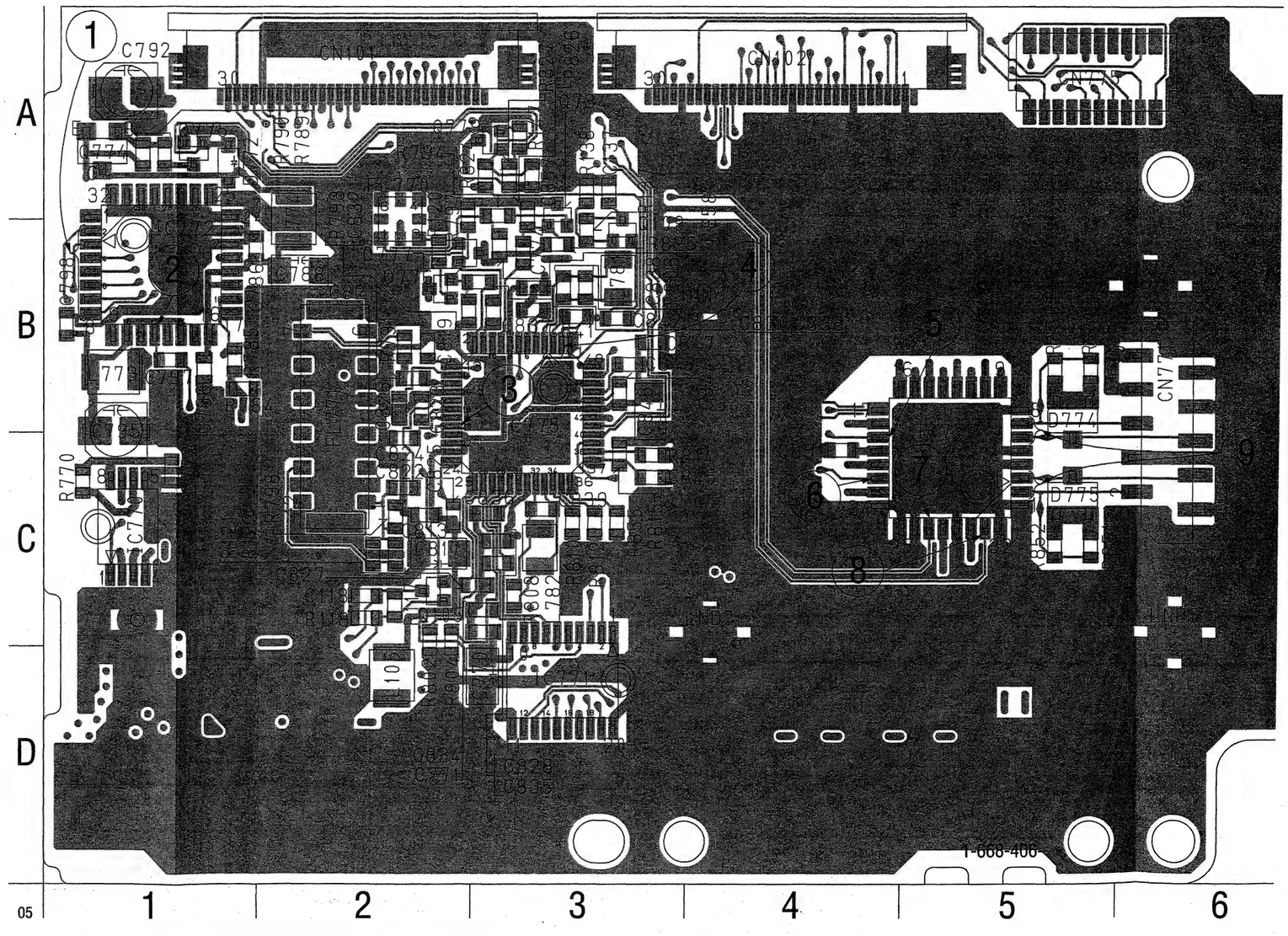
RP-228 BOARD (SIDE A)

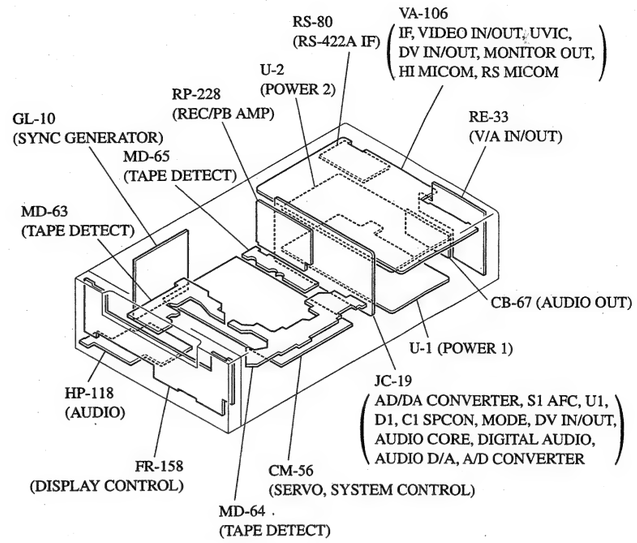
CN101	A-2
CN102	A-4
CN771	B-6
CN775	A-5
D772	A-1
D774	B-5
D775	C-5
IC770	C-1
IC771	D-3
IC772	B-1
IC775	B-3
IC777	C-5
Q105	C-2
Q109	B-3
Q774	A-1
Q775	A-1
Q776	B-2
Q777	B-2
Q779	A-3
Q784	B-3

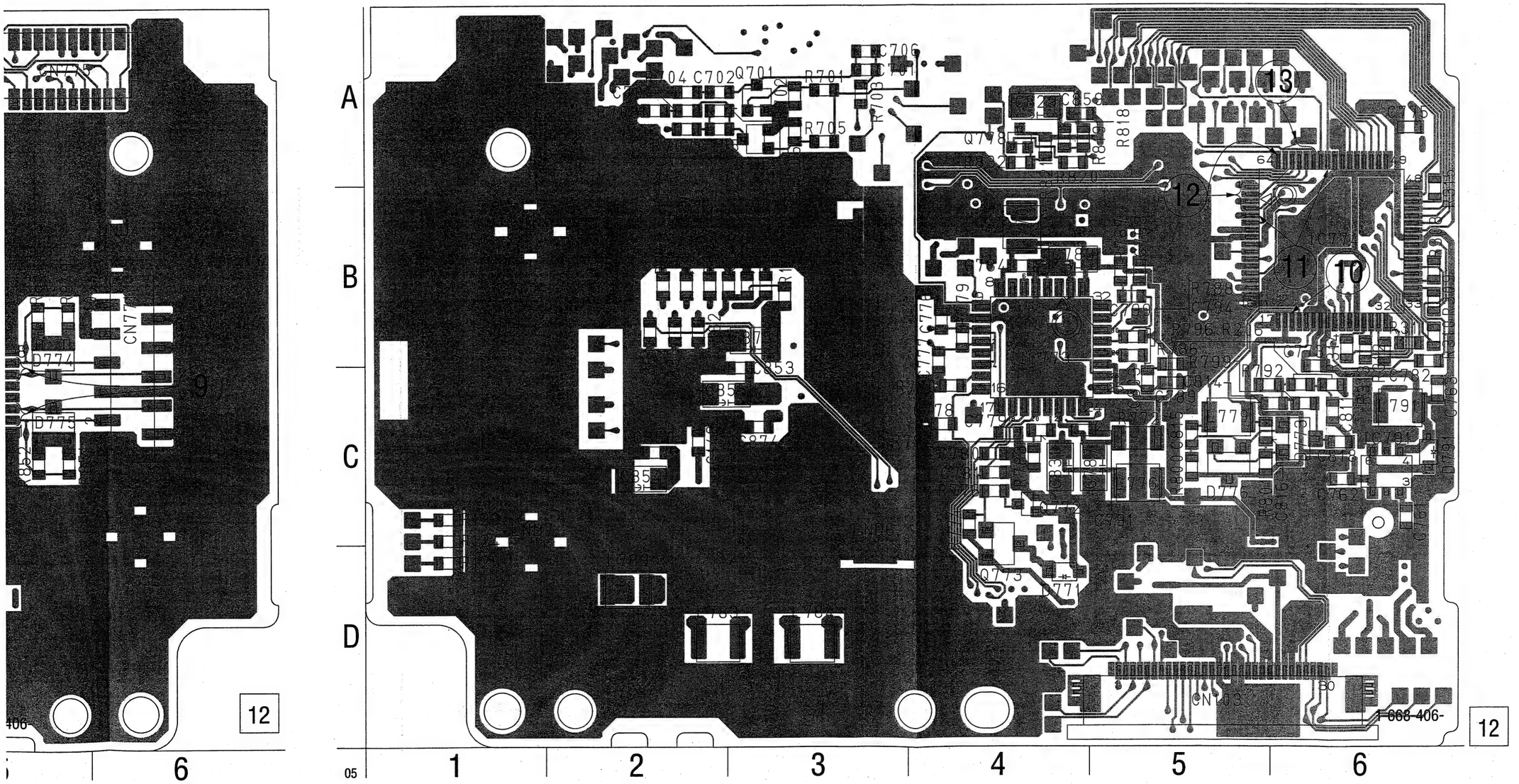
RP-228 (REC/PB AMP) PRINTED WIRING BOARD
– Ref. No.: RP-228 board; 7,000 series –

- **For Printed Wirin**
- RP-228 board is s of layers 2 to 5 ha
- There are few cas is printed on this c
- Chip transistor

RP-228 BOARD (SIDE A)







- **For Printed Wiring Board.**
- RP-228 board is six-layer print board. However, the patterns of layers 2 to 5 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor

RP-228 BOARD (SIDE B)	
CN103	D-5
D771	D-4
D773	C-6
IC773	B-4
IC774	B-6
Q701	A-3
Q702	A-3
Q772	C-4
Q773	D-4
Q778	A-4

RP-228 BOARD (SIDE B)

RP-228 BOARD

REC/PB AMP
-REF.NO.:7.000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE

TO CM-56 BOARD CN003 (SEE PAGE 4-127)

CN103 30P

XMECHA_CS_D1	30	CL750 A1
DRAM-BNK	29	CL751 A2
TBC-REN	28	CL752 A3
JSWP	27	R1
XME_MP	26	CL168 R2
RF 5V	25	
RF 5V	24	CL753
5V	23	
RP 3.1V	22	CL754
RP 3.1V	21	
PBRF	20	CL755
ATF GAIN	19	CL756
GND	18	
GND	17	CL770
PBRF PSV	16	
GND	15	
SP SI	14	CL757 A4
SP SD	13	CL758 A5
SP SCK	12	CL759 A6
SP CS MWCHA	11	CL760 A7
MD_RST	10	CL761 A8
TRKD	9	A9
FLTD	8	A10
MECA STB DA	7	CL762
MECHA SCK	6	M3
MECHA SI	5	CL763 M2
MECHA SO	4	CL764 M1
SCOD WINDOW	3	CL765 D36
AV_AREA	2	CL766
DX_PLL_ERR	1	CL767

CN775 20P

TCK	1	CL100 D12
TMS	2	CL101 D14
TDI	3	CL102 D65
GND	4	CL106
TRACK_ID	5	CL822 R1
JSWP	6	CL819
GND	7	CL818
RF_MONITOR	8	CL109 RF_VCC2
VCC2	9	CL106 R3
AGC_IN	10	CL107 RF_VCC1
VCC1	11	CL105 R4
EQ_IN	12	CL817 R5
LOCK	13	CL821 R6
REF_OUT	14	CL820 R7
ENV_OUT	15	
GND	16	CL103
TDO	17	CL824 D15
C1ERP	18	A10
FLTD	19	
GND	20	

FOR CHECK

CN102 30P

GND	1	A2
DRAM-BANK	2	A3
TBC-REN	3	R1
JSWP	4	A10
FLTD	5	A9
TRKD	6	
GND	7	A1
MECHA_CS_D1	8	M1
MECHA_SO	9	M2
MECHA_SI	10	M3
MECHA_SCK	11	CL833
MD RESET	12	A8
XCS_MECHA	13	A7
GND	14	A6
SP_SCK	15	A5
SP_SO	16	A5
SP_SI	17	A4
EEPROM_XBUSY	18	CL845
EEPROM_RST	19	CL846
XCS_EEPROM	20	CL847
RECA2	21	CL872 R8
RECA1	22	CL873 R9
PLLFRP	23	CL874 R10
CLKDLY	24	CL875 R11
C1ERP	25	
DREF	26	CL769
GND	27	D7
SCOD_WINDOW	28	D36
PLL_SRC	29	CL870
SP RST	30	D17 CL871

TO JC-19 BOARD(4/10) CN411 (SEE PAGE 4-36)

IC771 MB88346LPFV-G-BND-ER

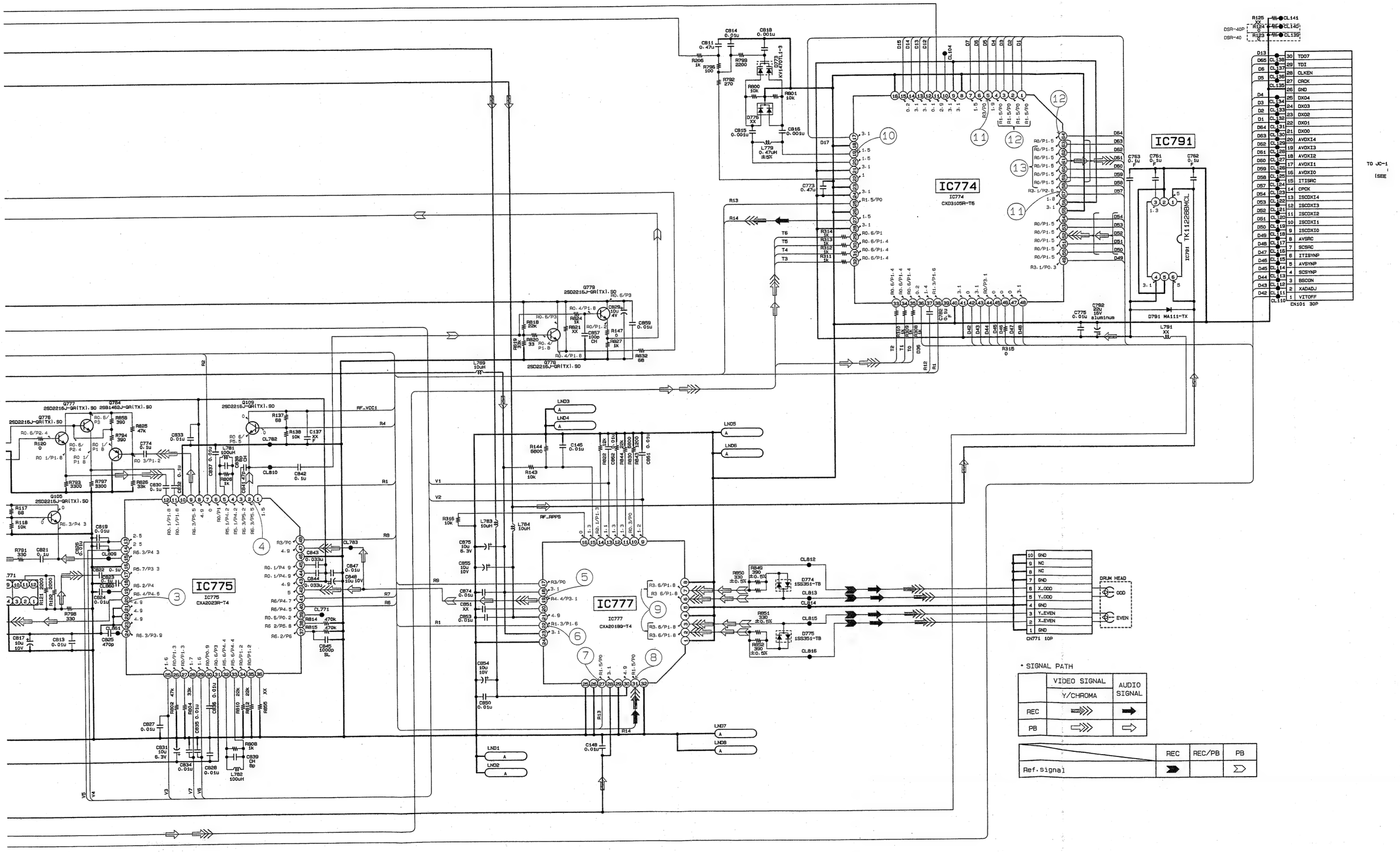
IC770 AK5440AM-E2

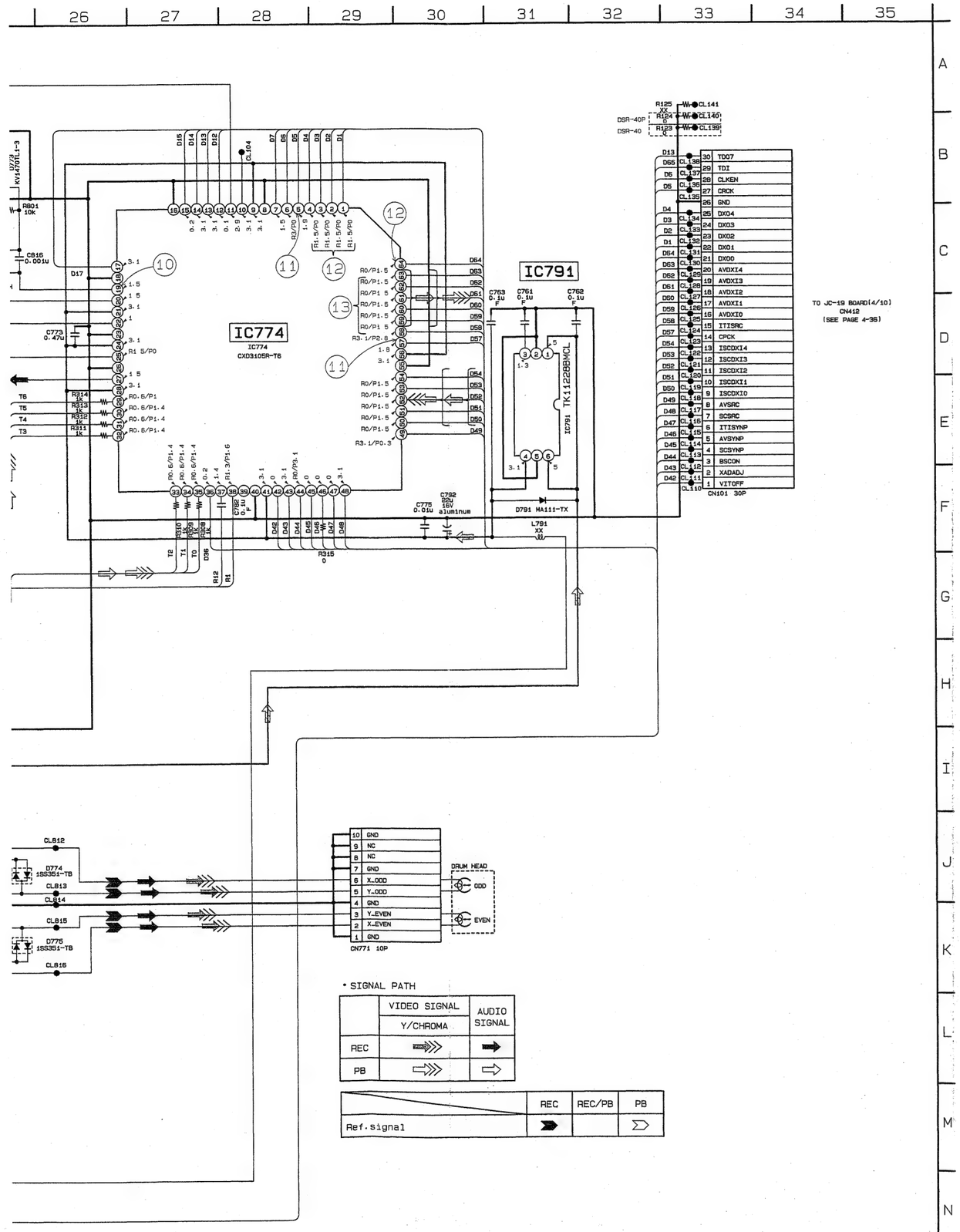
IC772 CXD2302R-T4

IC773 CXA1782Q-T4

IC775 CXA2023R-T4

Q773 2SB624-T1BV4
Q774 2SB624-T1BV4
Q775 UN5211J-(TX).SO
Q776 2SD2216J-QR(TX).SO
Q777 2SD2216J-QR(TX).SO
Q784 2SB1468J-QR(TX).SO
Q409 2SD2216J-QR(TX).SO
Q701 2SC4851-TL
Q702 2SC4851-TL
Q105 2SD2216J-QR(TX).SO


IC774
IC774
CXD3105R-T6
IC791
TK11228BMCL
IC775
IC775
CXA2023R-T4
IC777
IC777
CXA2015Q-T4
D791 MA111-TX
CN101 30P
CN771 10P
DRUM HEAD
ODD
EVEN
TO JC-1
(SEE
DSR-40P
DSR-40
TD07
TDI
CLKEN
CRCK
GND
DX04
DX03
DX02
DX01
DX00
AVDXI4
AVDXI3
AVDXI2
AVDXI1
AVDXIO
ITISRC
CPCK
ISCDXI4
ISCDXI3
ISCDXI2
ISCDXI1
ISCDXI0
AVSRC
SCSRC
ITISYNP
AVSYNP
SCSYNP
BSCON
XADADJ
VITOFF
GND
NC
NC
GND
Y_ODD
Y_ODD
GND
Y_EVEN
Y_EVEN
GND
RF_VCC1
RF_RPPS
V1
V2
R1
R2
R4
R5
R6
R7
R8
R9
R12
R13
R14
T0
T1
T2
T3
T4
T5
T6
* SIGNAL PATH
VIDEO SIGNAL
Y/CHROMA
AUDIO SIGNAL
REC
PB
REC/PB
Ref.Signal



RP-228 BOARD

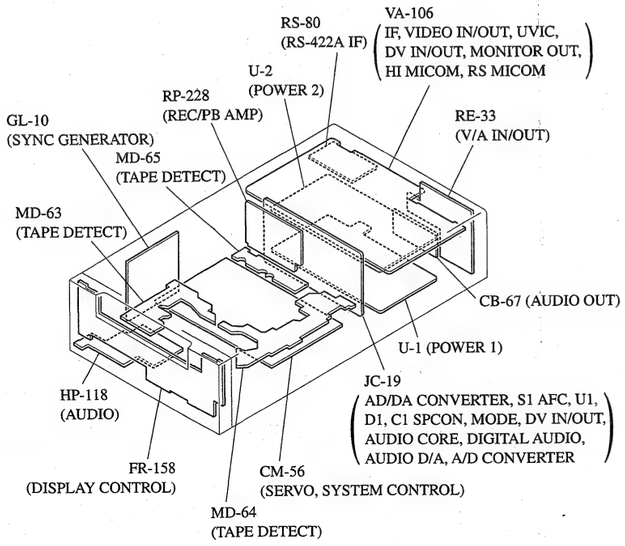
❶	3.4 Vp-p, 0.04 µsec IC772 ② – ⑧ PB	❽	4.0 Vp-p, 3.3 msec IC777 ㉛ REC
❷	2.3 Vp-p, 41.8 MHz IC772 ⑫ PB	❾	4.5 Vp-p, 6.7 msec IC777 ② ③ ⑥ ⑦
❸	1.6 Vp-p, 3.3 msec IC775 ⑳ PB	❿	4.3 Vp-p, 41.8 MHz IC774 ⑲ REC/PB
❹	0.5 Vp-p, 3.3 msec IC775 ② PB	⓫	3.6 Vp-p, 8.38 MHz IC774 ⑤ REC/PB IC774 ㊼ PB
❺	0.6 Vp-p, 6.7 msec IC777 ⑲ PB	⓬	3.4 Vp-p, 0.25 µsec IC774 ① – ④, ㊹
❻	3.0 Vp-p, 6.7 msec IC777 ㉒ REC/PB	⓭	3.4 Vp-p, 0.25 µsec IC774 ㊾ – ㊸
❼	6.0 Vp-p, 3.3 msec IC777 ㉗ REC		

JC-19 (AD/DA CONVERTER, S1 AFC, U1, D1, C1 SPCON, MODE, DV IN/OUT, AUDIO CORE, DIGITAL AUDIO, AUDIO D/A, A/D CONVERTER) PRINTED WIRING BOARD

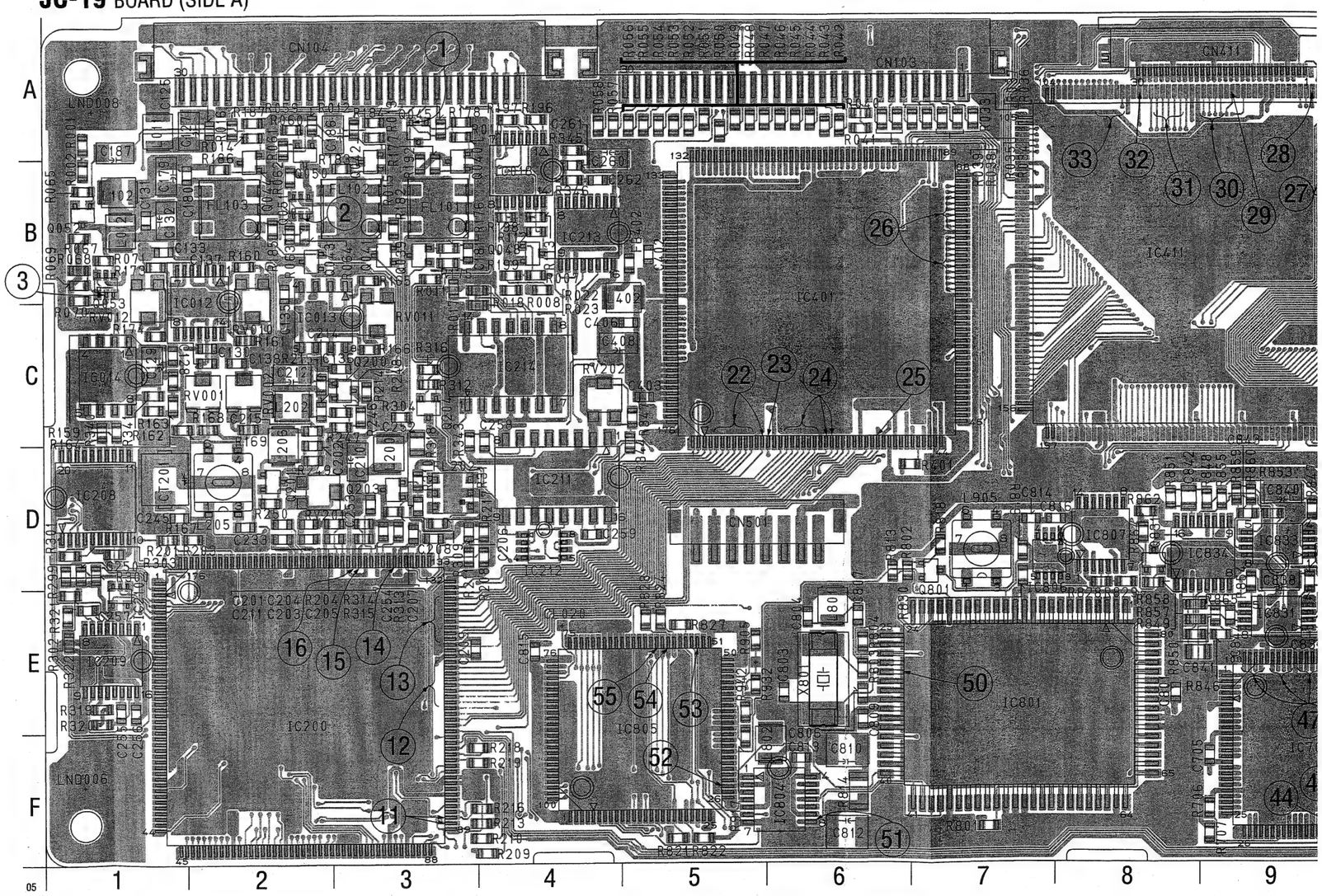
– Ref. No.: JC-19 board; 5,000 series –

JC-19 BOARD (SIDE A)

CN103	A-6
CN104	A-3
CN411	A-9
CN412	A-10
CN501	D-5
CN831	D-10
IC012	C-2
IC013	C-2
IC014	C-1
IC018	B-4
IC019	C-11
IC200	E-2
IC209	E-1
IC210	E-1
IC211	D-4
IC212	D-4
IC213	B-4
IC214	C-4
IC401	B-6
IC410	B-10
IC411	B-8
IC701	F-9
IC702	E-10
IC801	E-7
IC804	F-6
IC805	E-4
IC807	D-8
IC831	E-9
IC833	D-9
IC840	D-11
Q039	B-3
Q040	B-3
Q041	B-3
Q042	B-3
Q043	B-2
Q044	B-2
Q045	A-3
Q048	B-4
Q050	A-2
Q051	B-2
Q052	B-1
Q053	B-1
Q200	C-3
Q201	D-2
Q801	D-7

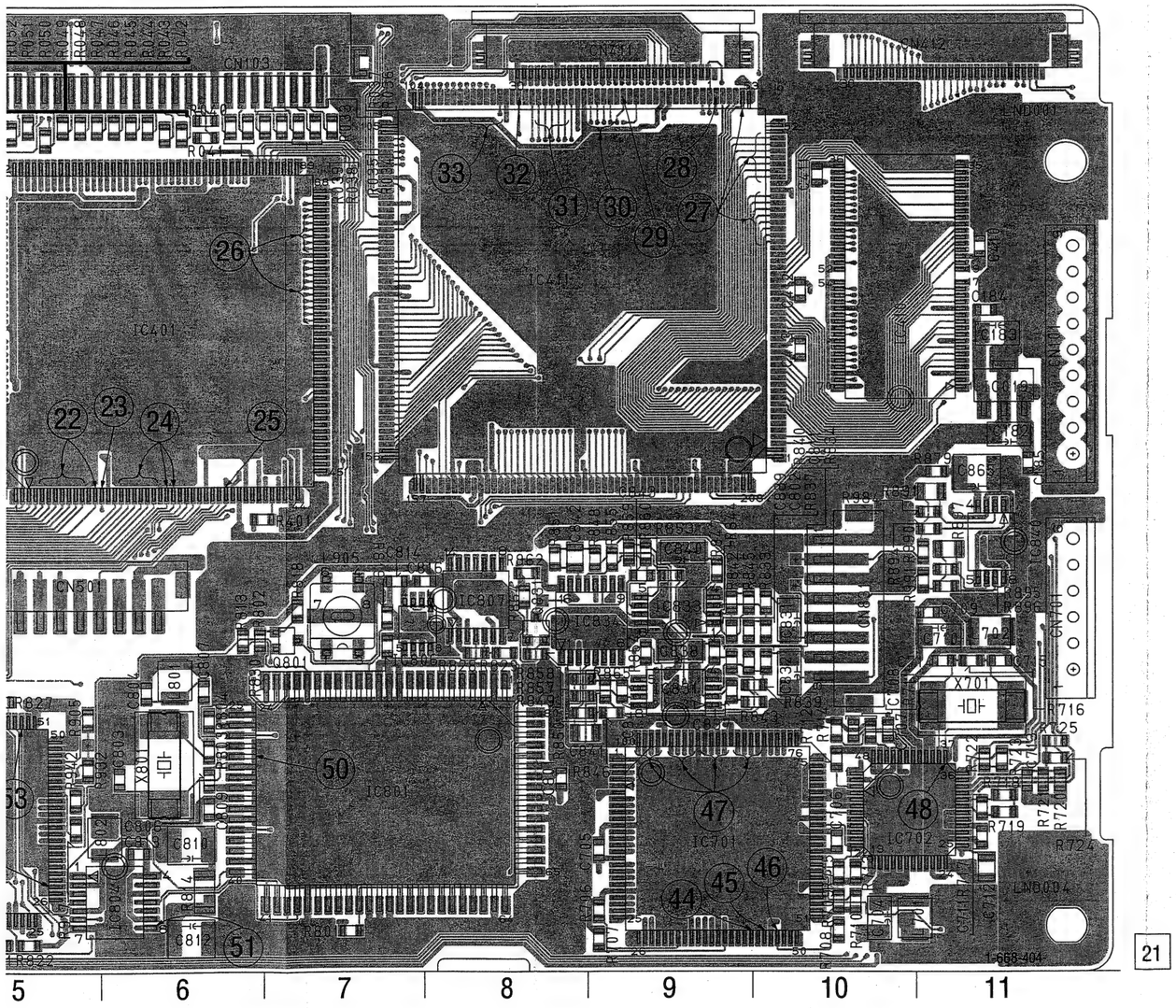


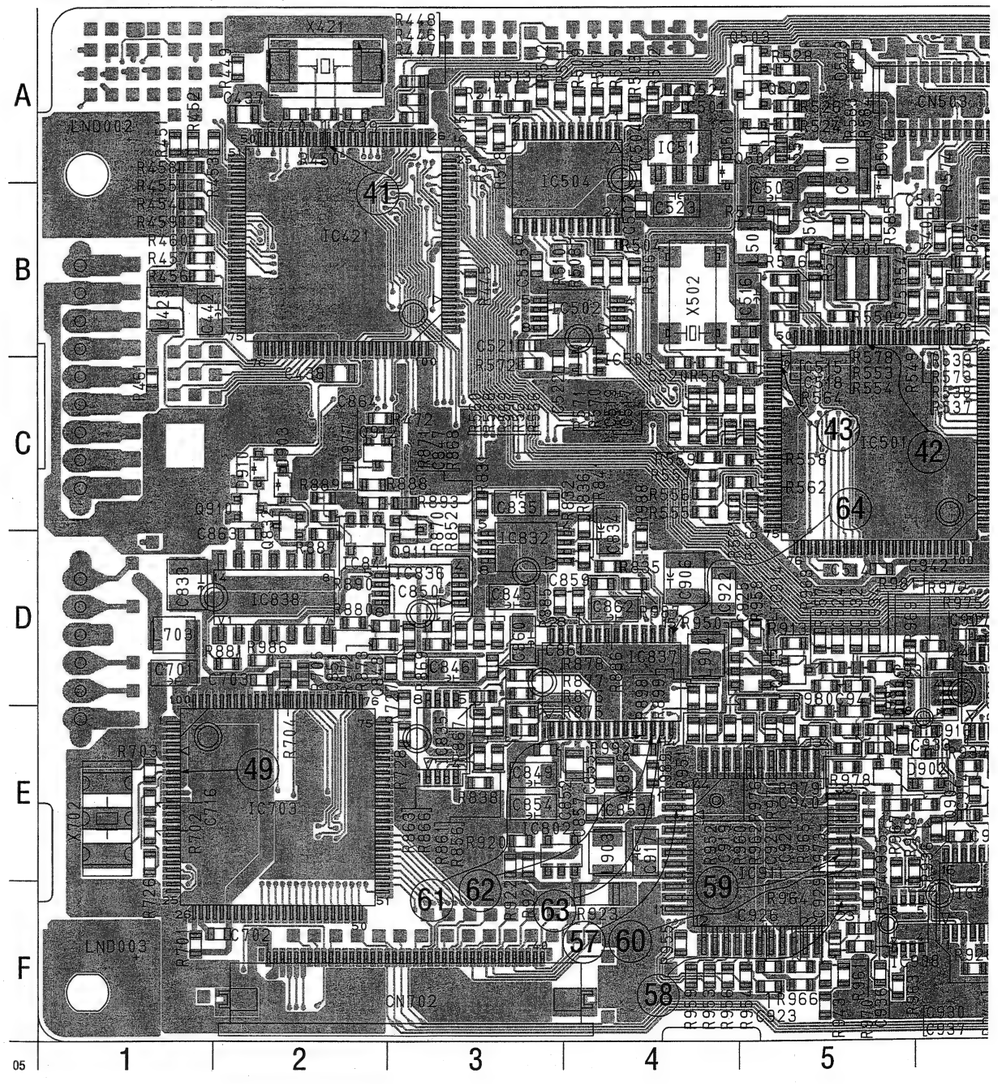
JC-19 BOARD (SIDE A)



- **For Printed Wiring Board.**
- JC-19 board is six-layer print board. However, the patterns of layers 2 to 5 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor

JC-19 BOARD (SIDE B)

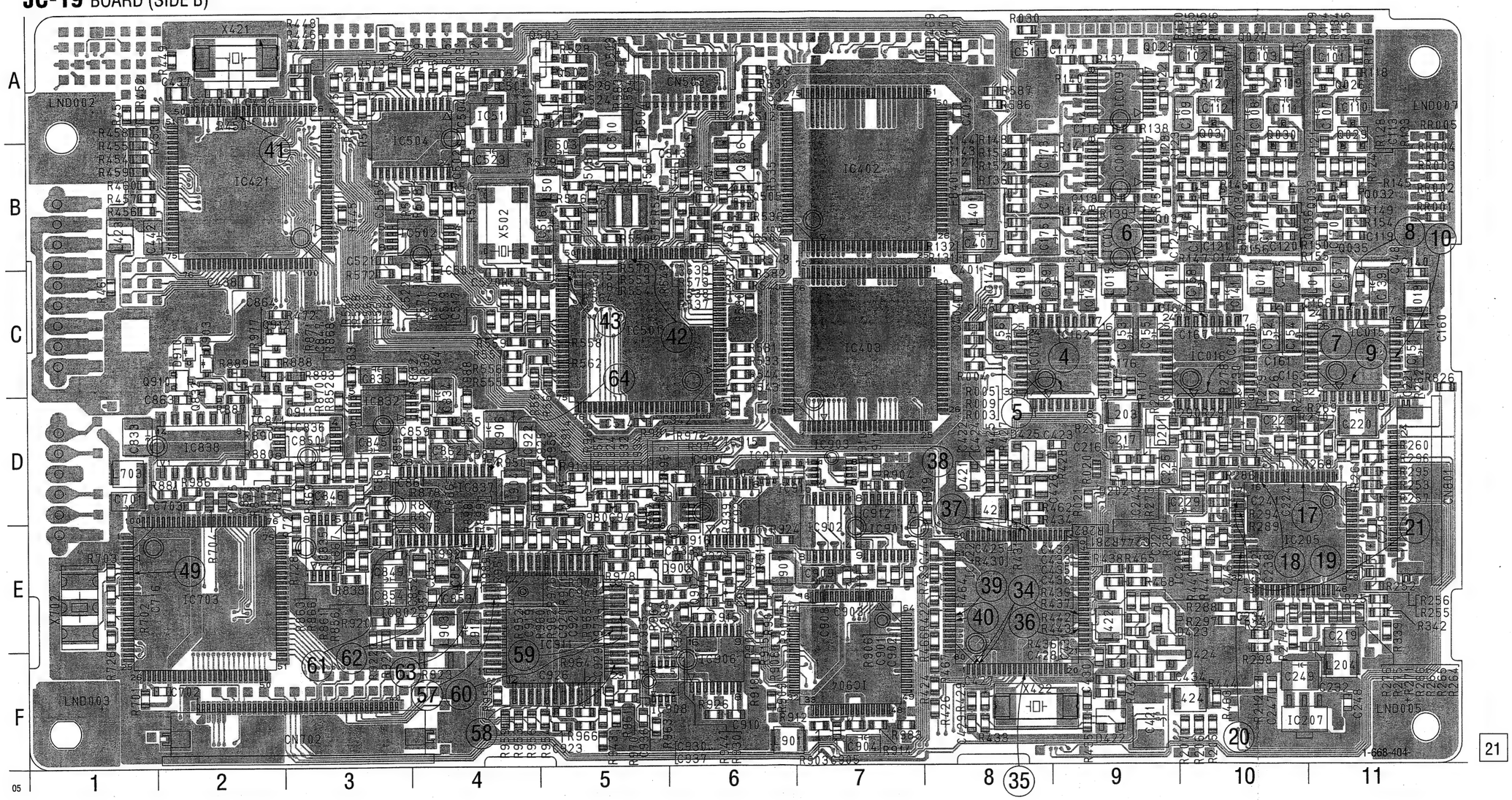




AUDIO, AUDIO D/A, A/D CONVERTER

e patterns of
am.
n this model

JC-19 BOARD (SIDE B)



JC-19 BOARD (SIDE B)

CN101	B-1
CN503	A-6
CN701	D-1
D201	D-9
D421	D-8
D422	F-9
D423	E-9
D424	E-9
D425	D-8
D501	A-4
D503	A-5
D504	B-5
D901	E-6
D902	E-6
D903	C-2
D910	C-2
IC009	A-9
IC010	B-9
IC011	B-9
IC015	C-11
IC016	C-10
IC017	C-9
IC205	E-10
IC206	E-10
IC207	F-10
IC402	B-7
IC403	C-7
IC421	B-2
IC422	E-8
IC501	C-5
IC502	B-4
IC503	B-4
IC504	A-4
IC510	A-5
IC511	A-4
IC703	E-2
IC802	E-3
IC832	D-3
IC835	E-3
IC836	D-3
IC837	D-4
IC838	D-2
IC841	D-2
IC901	D-7
IC902	D-7
IC903	D-7
IC904	F-7
IC906	F-6
IC907	D-6
IC908	F-5
IC909	D-6
IC911	E-5
IC914	D-5
IC915	D-6
IC916	D-6
Q026	A-11
Q027	A-10
Q028	A-10
Q029	A-11
Q030	A-10
Q031	A-10
Q032	B-11
Q033	B-10
Q034	B-10
Q035	B-11
Q036	B-10
Q037	B-10
Q501	A-5
Q502	A-5
Q504	B-6
Q505	B-6
Q506	B-6
Q832	C-2
Q902	E-6
Q903	D-5
Q910	C-2
Q911	C-3

JC-19 (AD/DA CONVERTER) SCHEMATIC DIAGRAM

JC-19 BOARD(1/10)

AD/DA CONVERTER
-REF. NO. :5.000 SERIES-
XX MARK:NO MOUNT

NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE
*:IMPOSSIBLE TO MEASURE THE VOLTAGE AT THE MARKED POINTS.

CN101 9P
UNSW_5V 1
UNSW_3.1V 2
VIDEO_5V 3
J_3.1V 4
GND 5
VIDEO_-5V 6
AUDIO_5V 7
AUDIO_GND 8
AUDIO_-5V 9

TO U-2 BOARD CN11 (SEE PAGE 4-144)

① TO JC-19 BOARD(10/10) (SEE PAGE 4-60)
AUDIO_GND
AUDIO_-5V
AUDIO_5V

㉕ TO JC-19 BOARD(7/10) (SEE PAGE 4-45)
GND
J_3.1V

⑦ TO JC-19 BOARD(3/10) (SEE PAGE 4-29)
J_3.1V
GND
J_2.1V

㉚ TO JC-19 BOARD(8/10) (SEE PAGE 4-51)
AUDIO_5V
J_3.1V

30P CN104
LALT 1
BLK 2
SF 3
N.C 4
CLP2 5
S1_COUT 6
GND 7
Y_OUT 8
GND 9
CR_OUT 10
GND 11
CB_OUT 12
GND 13
SGH 14
XYCSEP 15
N.C 16
NPSA 17
NPSB 18
Y_IN 19
GND 20
CR_IN 21
GND 22
CB_IN 23
AFCY 24
CLPY 25
N.C 26
N.C 27
AGC_ADJ 28
HUE_ADJ 29
VXO_ADJ 30

TO VA-105 BOARD(1/7) CN102 (SEE PAGE 4-72)

R003 F.B. AD1
R004 F.B. AD2
R005 F.B. AD3
R009 F.B. AD4
R011 XX AD5
R013 0
R015 0
R016 0
R017 F.B.
R018 F.B.
R020 F.B. AD6
R021 F.B. AD5
R030 F.B.

② TO JC-19 BOARD(2/10) (SEE PAGE 4-25)
2-1
2-2(N.C)
2-3
2-4
2-5
2-6
2-7
2-8
2-9
2-10
R002 0 AD5 AD1 AD2 AD3 AD4
R023 0 AD6 AD7

③ TO JC-19 BOARD(5/10) (SEE PAGE 4-37)
3-1
3-2

④ TO JC-19 BOARD(6/10) (SEE PAGE 4-41)
UNSW_5V
UNSW_3.1V
GND
4-1
4-2
4-3

IC019 S-81332HG-KW-T1 (OUT GND IN)
C184 0.01u
C183 10u 6.3V
C182 10u 6.3V
C185 0.01u

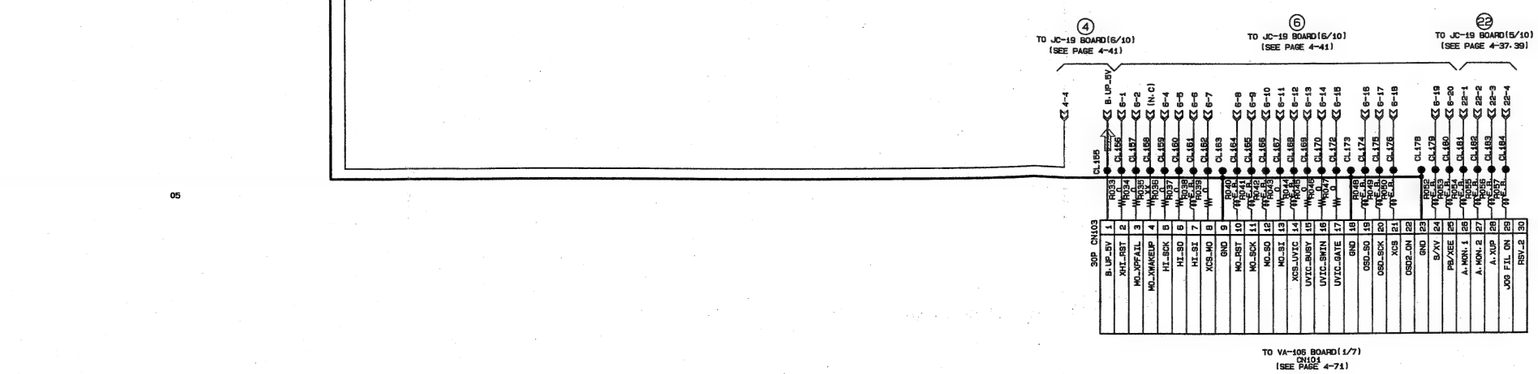
IC011 BA10324AFV-E2
IC013 BA10358F-E2
IC018 TC74HC4066AFT(EL)
IC010 BA10324AFV-E2
IC014 NJM4581M (TE2)
IC009 BA10324AFV-E2
IC012 BA10324AFV-E2

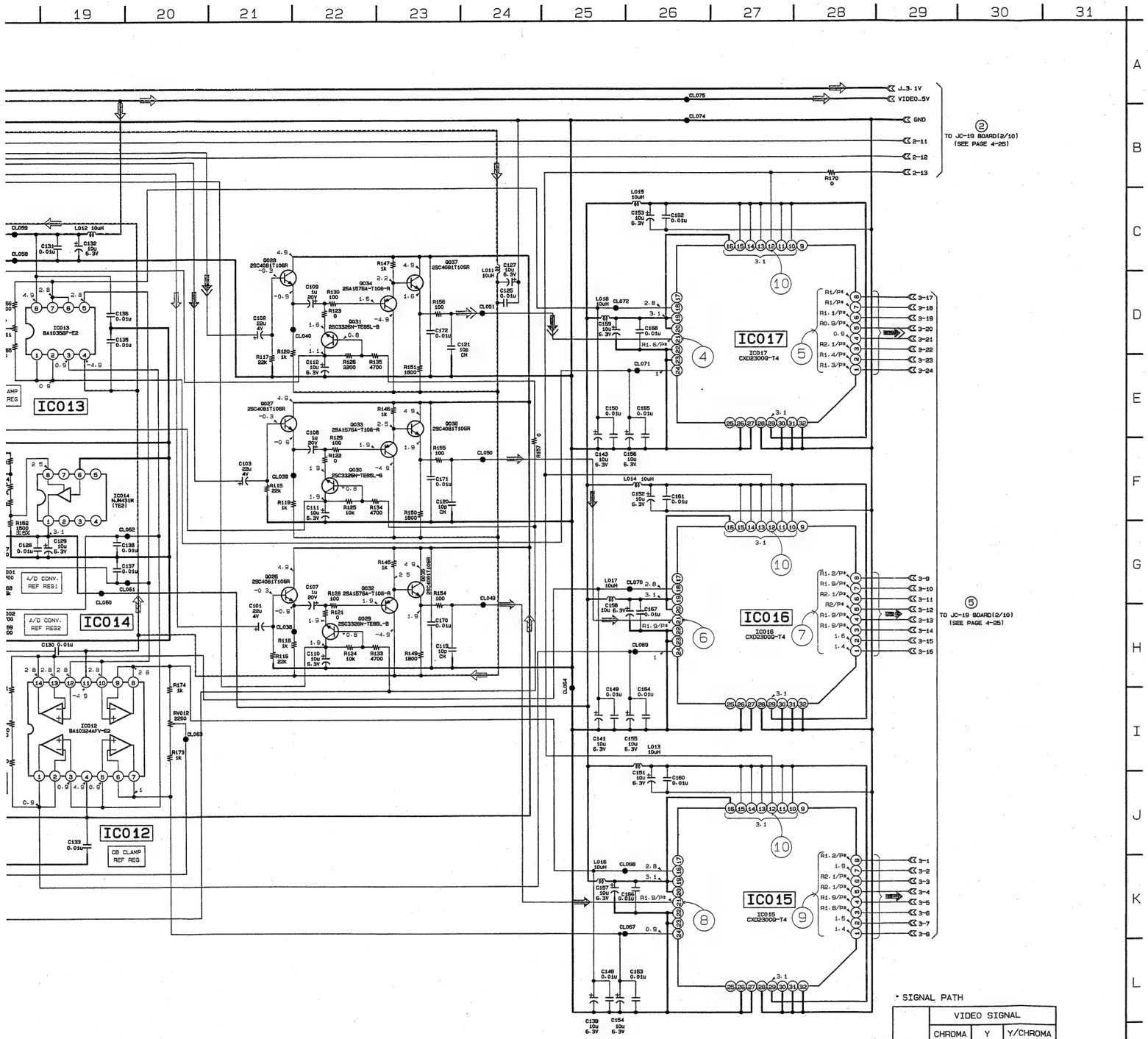
Y CLAMP REF REG
A/D CONV. REF REG1
A/D CONV. REF REG2
CR CLAMP REF REG
CB CLAMP REF REG

Q050 2SC4081T106R
Q051 XP6501-TXE
Q052 2SC4081T106R
Q053 XP6501-TXE
Q039 2SA1576A-T106-R
Q040 2SC4081T106R
Q045 2SA1576A-T106-R
Q042 2SC4081T106R
Q041 2SA1576A-T106-R
Q043 2SA1576A-T106-R
Q044 2SC4081T106R
Q048 UN5213-TX

FL101
FL102
FL103

L102 10uH
L012 10uH





JC-19 BOARD (1/10)

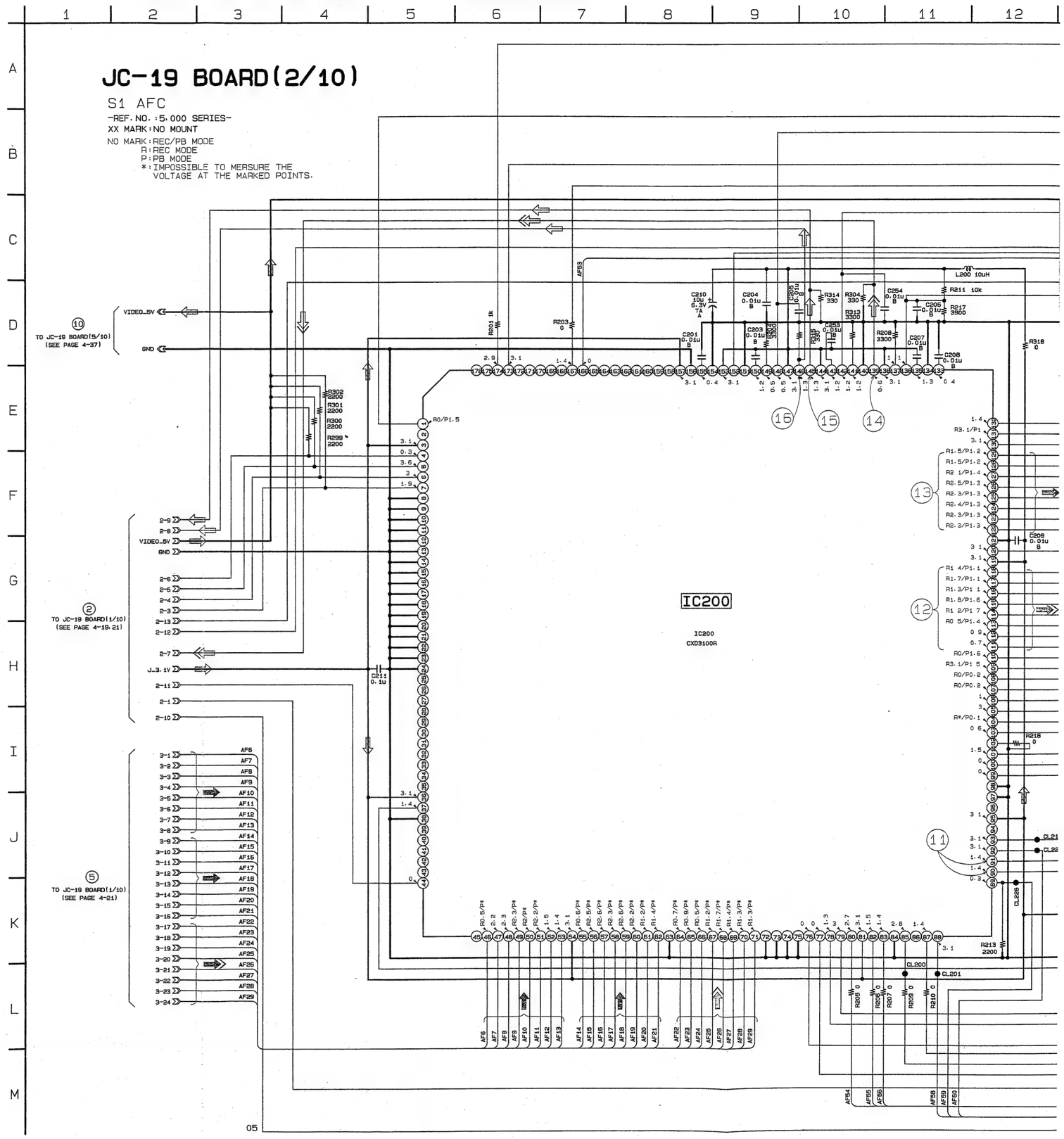
❶ 0.54 Vp-p, H — Q045 Ⓔ PB	❻ 0.9 Vp-p, H — IC016 ㉑ REC
❷ 0.54 Vp-p, H — Q051 ② PB	❼ 3.6 Vp-p, 0.15 µsec — IC016 ① – ⑧ REC
❸ 0.39 Vp-p, H — Q053 ② PB	❽ 0.8 Vp-p, H — IC015 ㉑ REC
❹ 2.0 Vp-p, H — IC017 ㉑ REC	❾ 3.6 Vp-p, 0.15 µsec — IC015 ① – ⑧ REC
❺ 3.6 Vp-p, 0.15 µsec — IC017 ① – ⑧ REC	❿ 3.4 Vp-p, 13.5 MHz — IC015 – IC017 ⑫ REC/PB

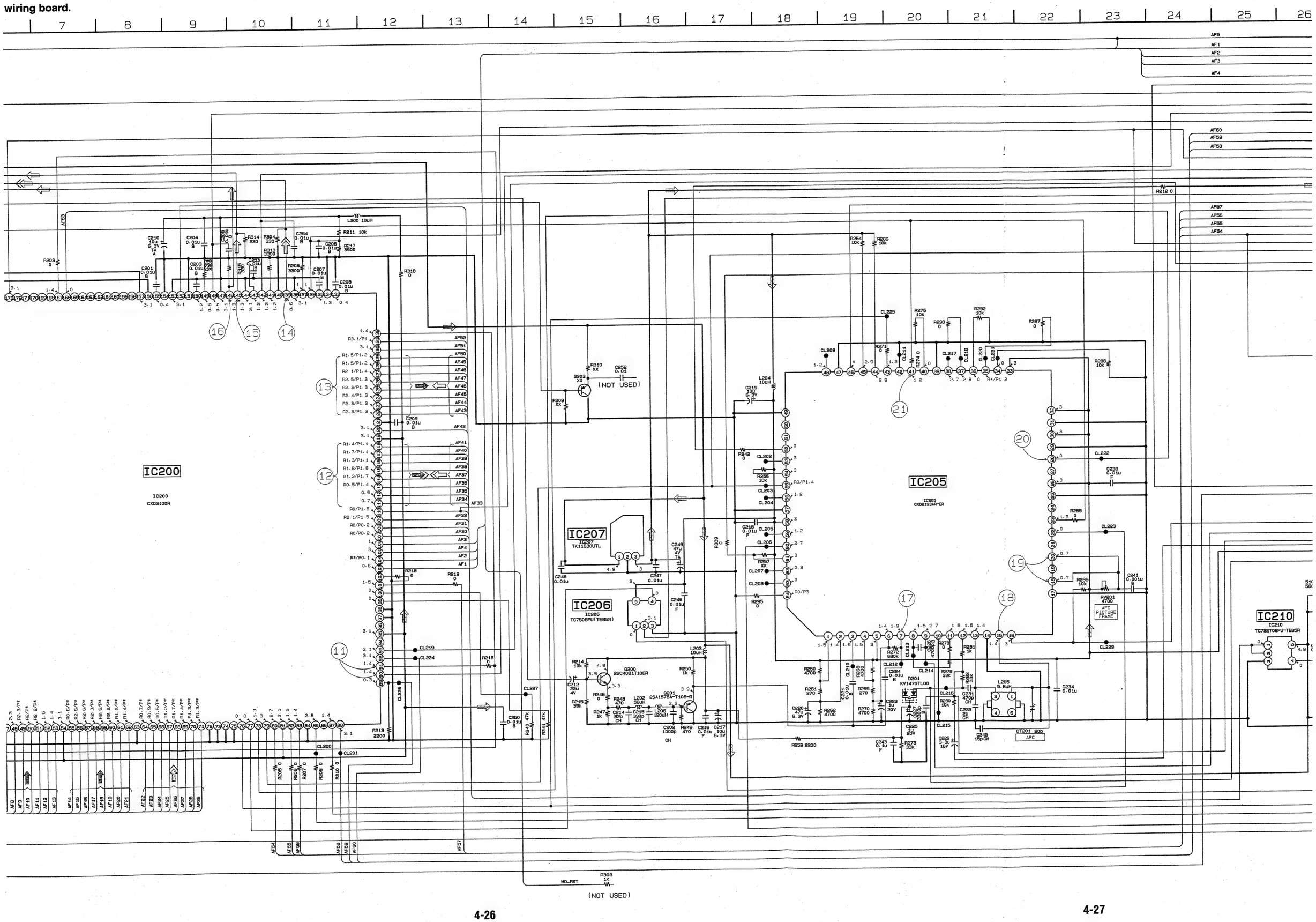
AD/DA CONVERTER
JC-19 (1/10)

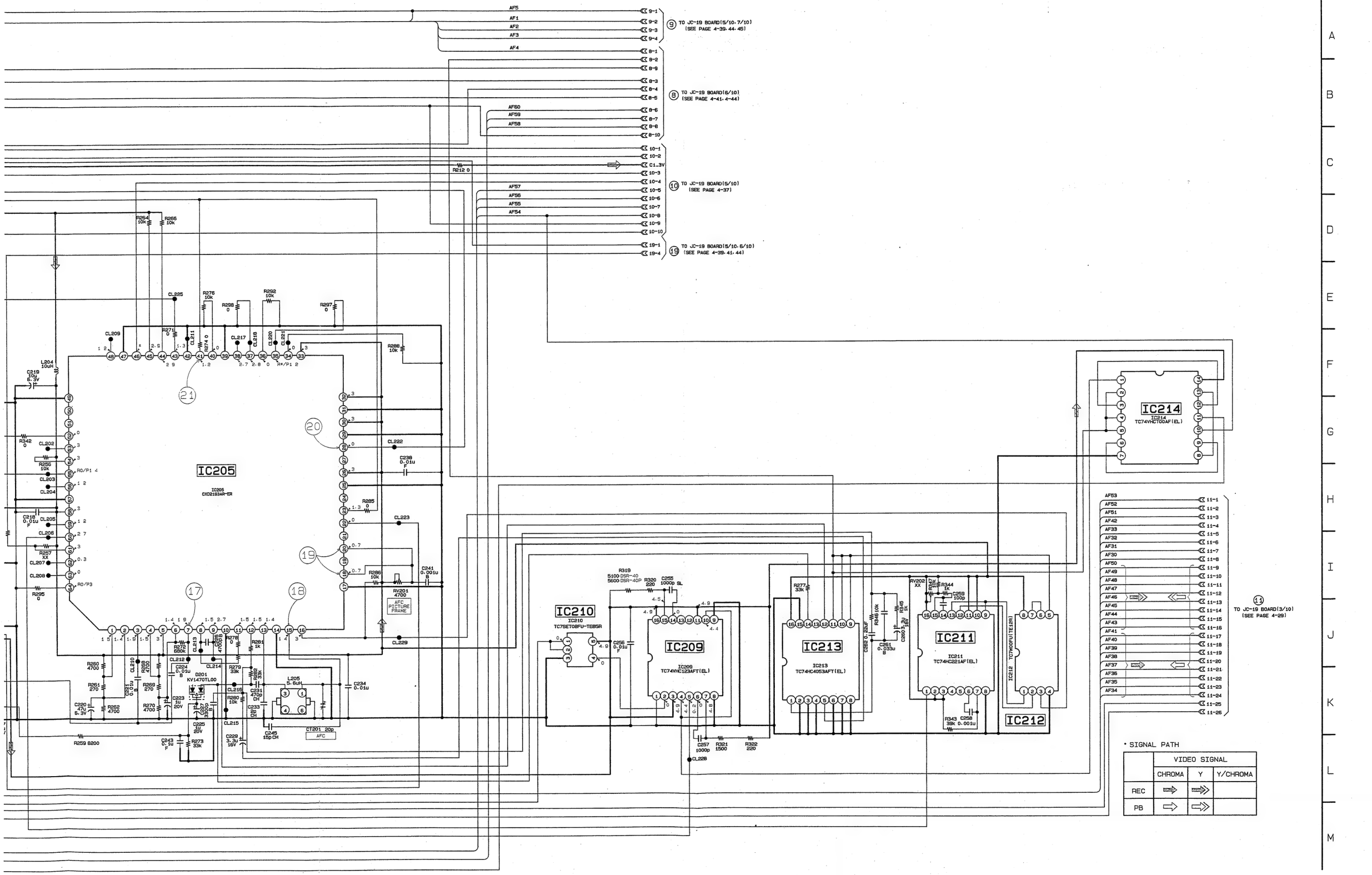
JC-19 BOARD (2/10)

⑪ 3.8 Vp-p, 13.5 MHz — IC200 ⑨⓪ ⑨① REC/PB	⑰ 0.8 Vp-p, H — IC205 ⑦ REC
⑫ 3.4 Vp-p, 0.15 µsec — IC200 ⑪⓪ – ⑪⑧ REC/PB	⑱ 3.2 Vp-p, 13.5 MHz — IC205 ⑮ REC/PB
⑬ 3.4 Vp-p, 0.15 µsec — IC200 ⑫⓪ – ⑫⑧ REC/PB	⑲ 3.0 Vp-p, H — IC205 ⑱ ⑳ REC/PB
⑭ 1.2 Vp-p, H — IC200 ⑬⑧ PB	⑳ 3.0 Vp-p, H — IC205 ㉘ REC/PB
⑮ 0.39 Vp-p, H — IC200 ⑭⑥ PB	㉑ 3.2 Vp-p, 13.5 MHz — IC205 ㊶ REC/PB
⑯ 0.54 Vp-p, H — IC200 ⑭⑥ PB	

JC-19 (S1 AFC) SCHEMATIC DIAGRAM • See page 4-14 for JC-19 printed wiring board.




IC200
IC200
CXD3100R
IC205
IC206
IC206
TC7S08FU(TE85R)
IC207
IC207
TK11630UTL
IC210
IC210
TC7SET08FU-TE85R
(NOT USED)
(NOT USED)
AFC PICTURE FRAME
AFC



• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	⇨	⇨	
PB	⇨	⇨	

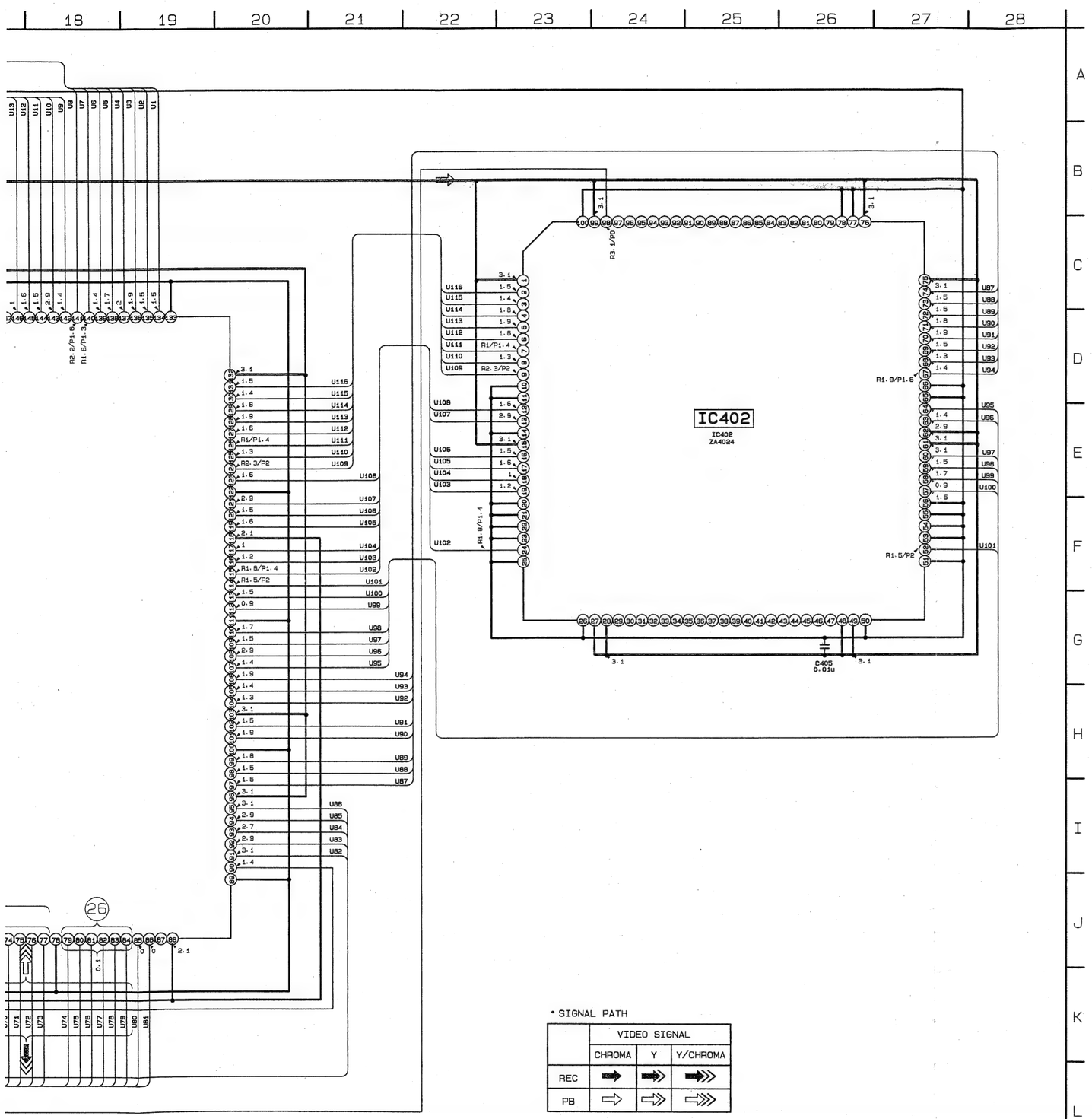
JC-19 BOARD(3/10)

U1
-REF. NO. :5.000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE

IC403
IC403
ZA4024

IC401
IC401
CXD3103R

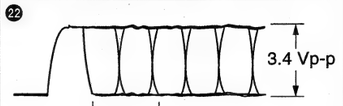
TO JC-19 BOARD(1/10) (SEE PAGE 4-19)
TO JC-19 BOARD(4/10) (SEE PAGE 4-34)
TO JC-19 BOARD(2/10) (SEE PAGE 4-28)
TO JC-19 BOARD(4/10-6/10.8/10) (SEE PAGE 4/34.37.42.52)
TO JC-19 BOARD(4/10.5/10) (SEE PAGE 4/34.37)
TO JC-19 BOARD(5/10) (SEE PAGE 4/37)



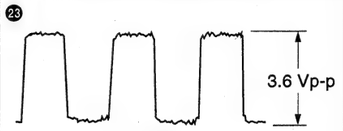
* SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	⇒	⇛
PB	⇨	⇨	⇨

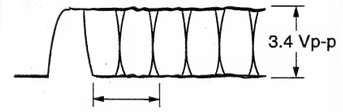
JC-19 BOARD (3/10)

㉒


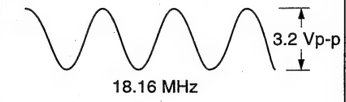
IC401 ⑤ – ⑪ ⑬ REC/PB

㉓


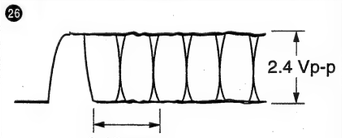
IC401 ⑭ REC/PB

㉔


IC401 ⑰ – ㉒ ㉔ ㉕ REC/PB

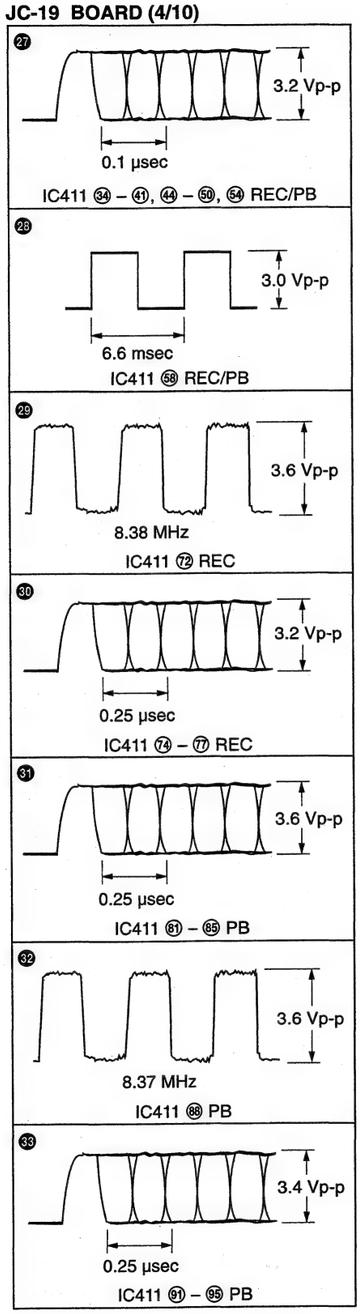
㉕


IC401 ㉝ REC/PB

㉖


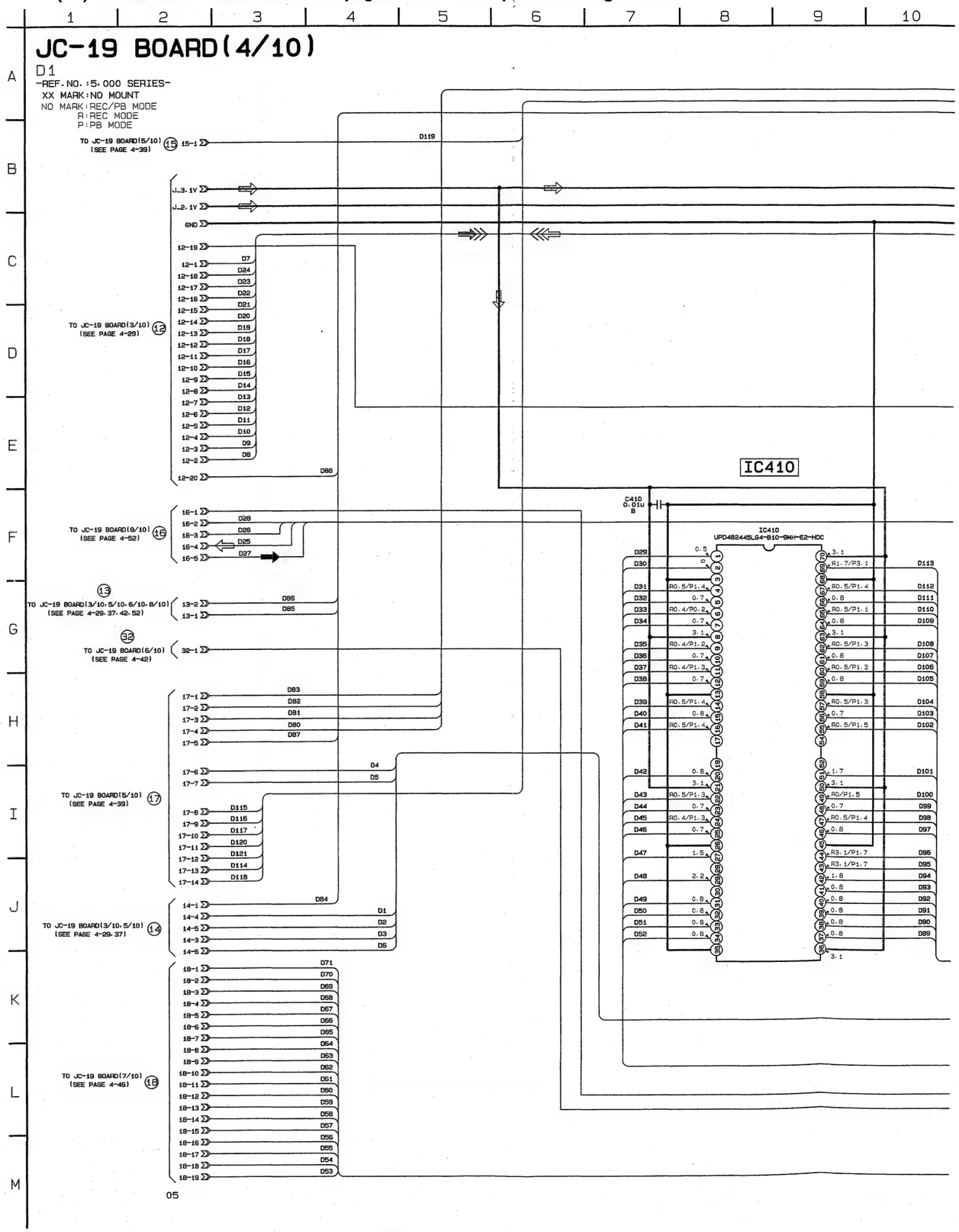
IC401 ㊽ – ㊼ ㊾ – ㊹ REC/PB

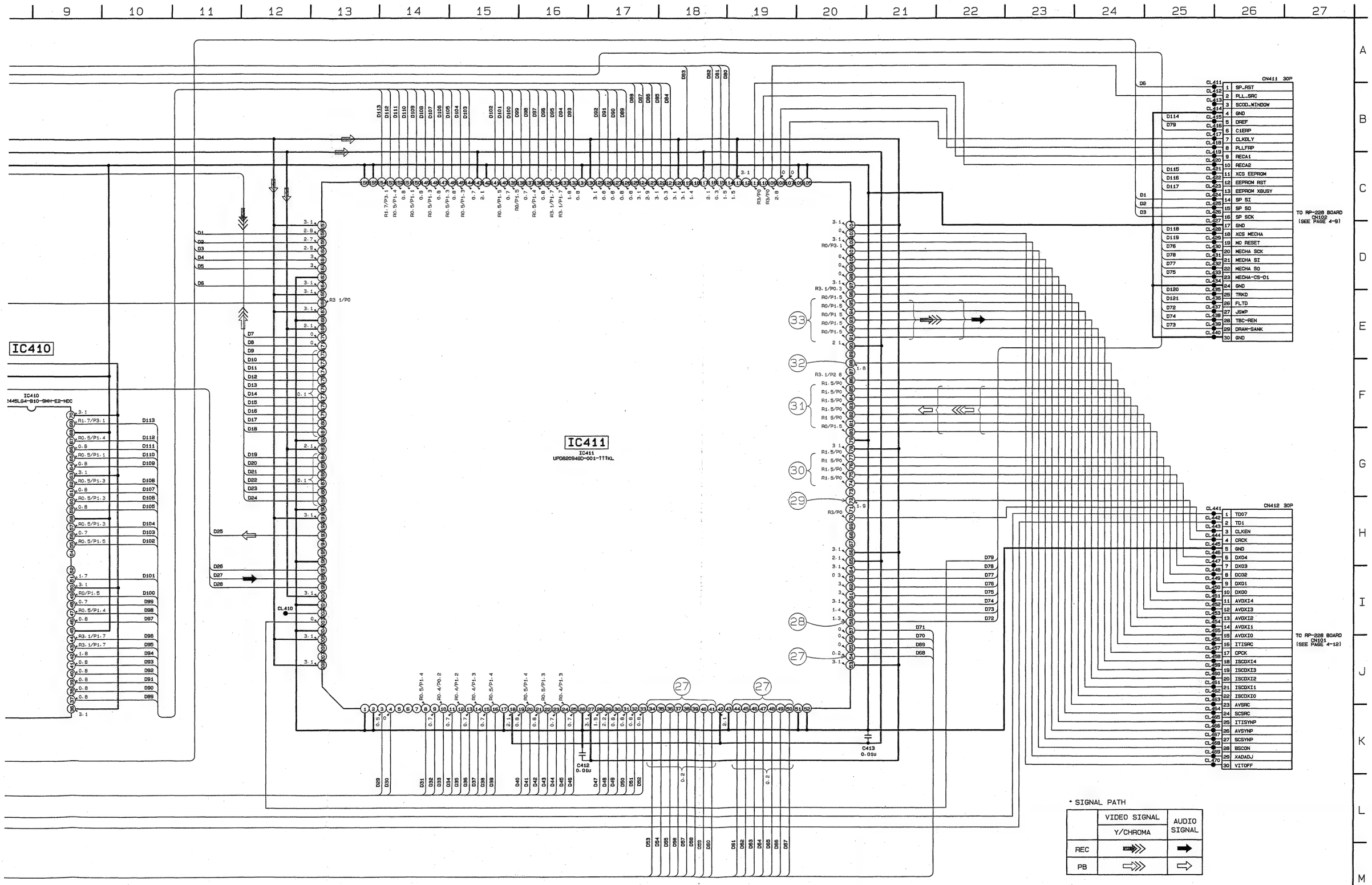
JC-19 BOARD (4/10)



D1
JC-19 (4/10)
V23312 / Druck 25

JC-19 (D1) SCHEMATIC DIAGRAM • See page 4-14 for JC-19 printed wiring board.




IC410
IC411
IC411
UPD820946D-001-???KL
CN411 30P
1 SP_RST
2 PLL_SRC
3 SCOD_WINDOW
4 GND
5 DREF
6 C1ERP
7 CLKDLY
8 PLLFRP
9 RECA1
10 RECA2
11 XCS EEPROM
12 EEPROM RST
13 EEPROM XBUSY
14 SP SI
15 SP SO
16 SP SCK
17 GND
18 XCS MECHA
19 MC RESET
20 MECHA SCK
21 MECHA SI
22 MECHA SO
23 MECHA-CS-D1
24 GND
25 TRKD
26 FLTD
27 JSWP
28 TBC-REN
29 DRAM-SANK
30 GND
TO RP-228 BOARD CN102 (SEE PAGE 4-9)
CN412 30P
1 TDO7
2 TD1
3 CLKEN
4 CRCK
5 GND
6 DX04
7 DX03
8 DC02
9 DX01
10 DX00
11 AVDXI4
12 AVDXI3
13 AVDXI2
14 AVDXI1
15 AVDXI0
16 ITISRC
17 CPCK
18 ISCDXI4
19 ISCDXI3
20 ISCDXI2
21 ISCDXI1
22 ISCDXI0
23 AVSRC
24 SCSRC
25 ITISYNP
26 AVSYNP
27 SCSYNP
28 BSCON
29 XADADJ
30 VITOFF
TO RP-228 BOARD CN101 (SEE PAGE 4-12)
C412 0.01u
C413 0.01u
* SIGNAL PATH
VIDEO SIGNAL
Y/CHROMA
AUDIO SIGNAL
REC
PB

JC-19 BOARD(5/10)

C1 SPCON

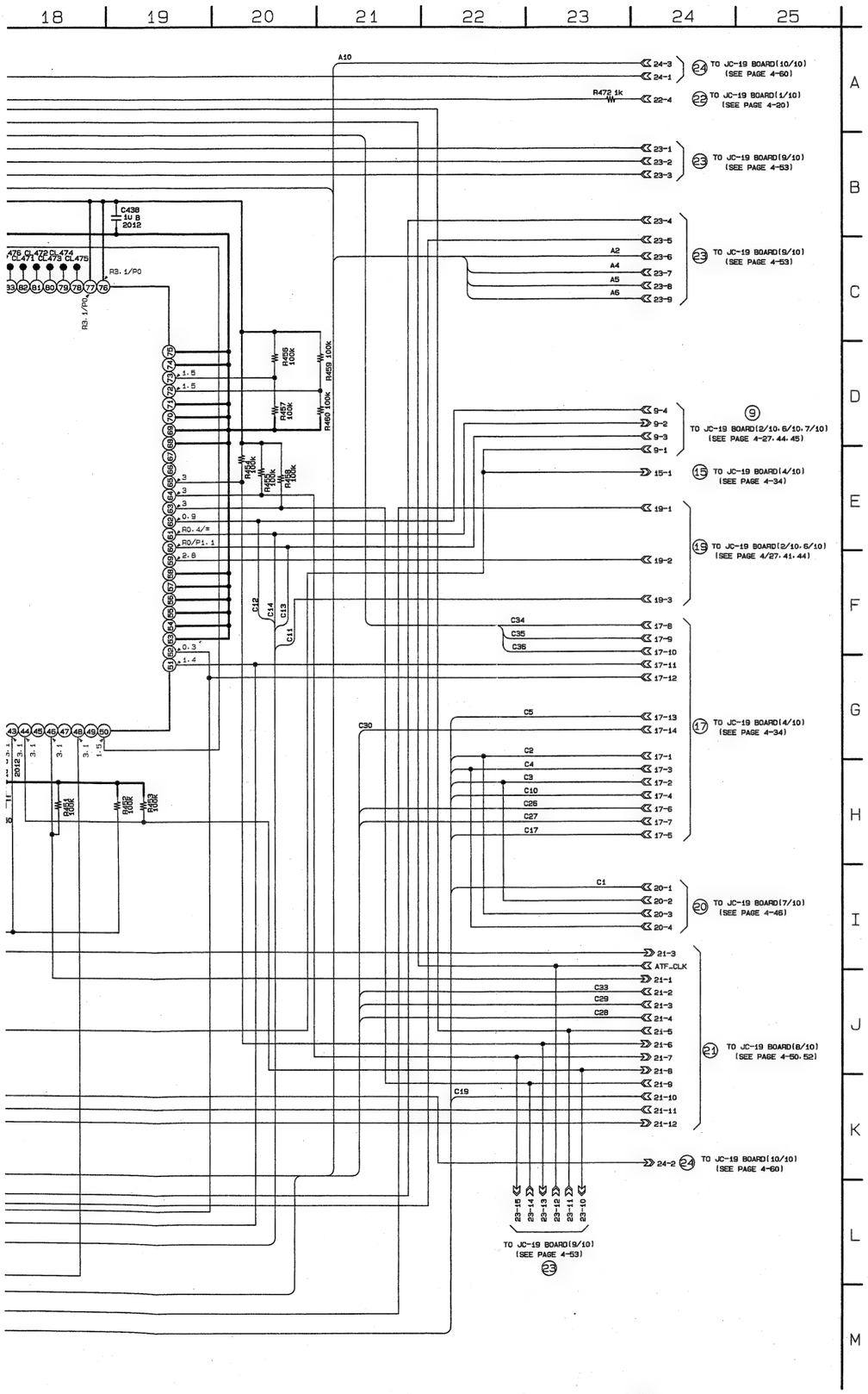
-REF.NO. :5.000 SERIES-

XX MARK:NO MOUNT

NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE

IC422
IC422
CXD3106R

IC421
IC421
CXP912032-074R-T5



JC-19 BOARD (5/10)

34
3.4 Vp-p
13.5 MHz
IC422 ② ③ ㉘ REC/PB

35
3.4 Vp-p
27 MHz
IC422 ⑫ REC/PB

36
3.2 Vp-p
13.5 MHz
IC422 ㉕ REC/PB

37
3.2 Vp-p
18.1 MHz
IC422 ㊽ ㊾ REC/PB

38
2.5 Vp-p
36.3 MHz
IC422 ㊺ REC/PB

39
2.9 Vp-p
33 msec
IC422 ㉝ REC/PB

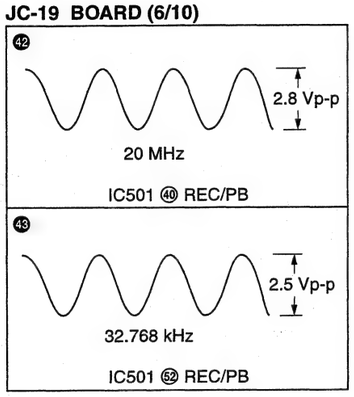
40
2.8 Vp-p
6.6 msec
IC422 ㉞ REC/PB

41
2.8 Vp-p
20 MHz
IC421 ㊵ REC/PB

C1 SPCON
JC-19 (5/10)

JC-19 (MODE) SCHEMATIC DIAGRAM • See page 4-14 for JC-19 printed wiring board.

JC-19 BOARD (6/10)



JC-19 BOARD(6/10)

MODE

-REF.NO.:5,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE
*:IMPOSSIBLE TO MERSURE THE VOLTAGE AT THE MARKED POINTS.

CN501 8P
CHIME_VDD 1 — CL501
CHIME_SDA 2 — CL502
CHIME_SCK 3 — CL503
CHIME_GND 4 — CL504
C_IN 5 — CL505
N.C. 6 — CL506
UNSW_3.1V 7 — CL507
GND 8 — CL508
TO CM-56 BOARD CN002 (SEE PAGE 4-95)

TO JC-19 BOARD(3/10,4/10,5/10,8/10) (SEE PAGE 4-29,34,37,52) 13 — 13-1, 13-2
TO JC-19 BOARD(2/10) (SEE PAGE 4-27) B — 8-6, 8-7, 8-8
TO JC-19 BOARD(4/10) (SEE PAGE 4-34) 32 — 32-1

CN503 20P

20	TMS	LANC_IN	19
18	TCK	LANC_OUT	17
16	TDI	LANC_P_CONT	15
14	TDOB	XLANC_PWR_ON	13
12	P_FAIL	XRESET	11
10	xPARSLEY_MODE	GND	9
8	GND	GND	7
6	GND	GND	5
4	UNSW_5V_RTN	UNSW_3.1	3
2	UNSW_5V	UNSW_5V	1

CL509, CL510, CL511, CL512, CL531, CL596, CL532
CL517, CL518, CL516, CL529, CL530, CL514, CL513, CL515

TO JC-19 BOARD(1/10) (SEE PAGE 4-19) 4
UNSW_5V, B.UP_5V, GND, UNSW_3.1V
22k R587, 22k R586
C524 0.01u B
C504 0.01u B
C505 0.01u B
IC504 MB88146APFV-G-BND-ER
CL597, CL598, CL520, CL522, CL524
R502 100, R503 100, R505 100, R507 100, R509 10k, R511 10k, R512 100, R513 100, R514 100, R515 100, R517 100, R518 100
R504 0, R506 0, R508 0, R510 0
MO_17, MO_48, MO_49, MO_50
CL519, CL521, CL523, CL525
IC504

TO JC-19 BOARD(2/10,5/10) (SEE PAGE 4-27,39) 19-1
TO JC-19 BOARD(2/10) (SEE PAGE 4-27) 8: 8-3, 8-4, 8-5
TO JC-19 BOARD(1/10) (SEE PAGE 4-19) 4: 4-1, 4-2, 4-3, 4-4

D503 MA728-TX

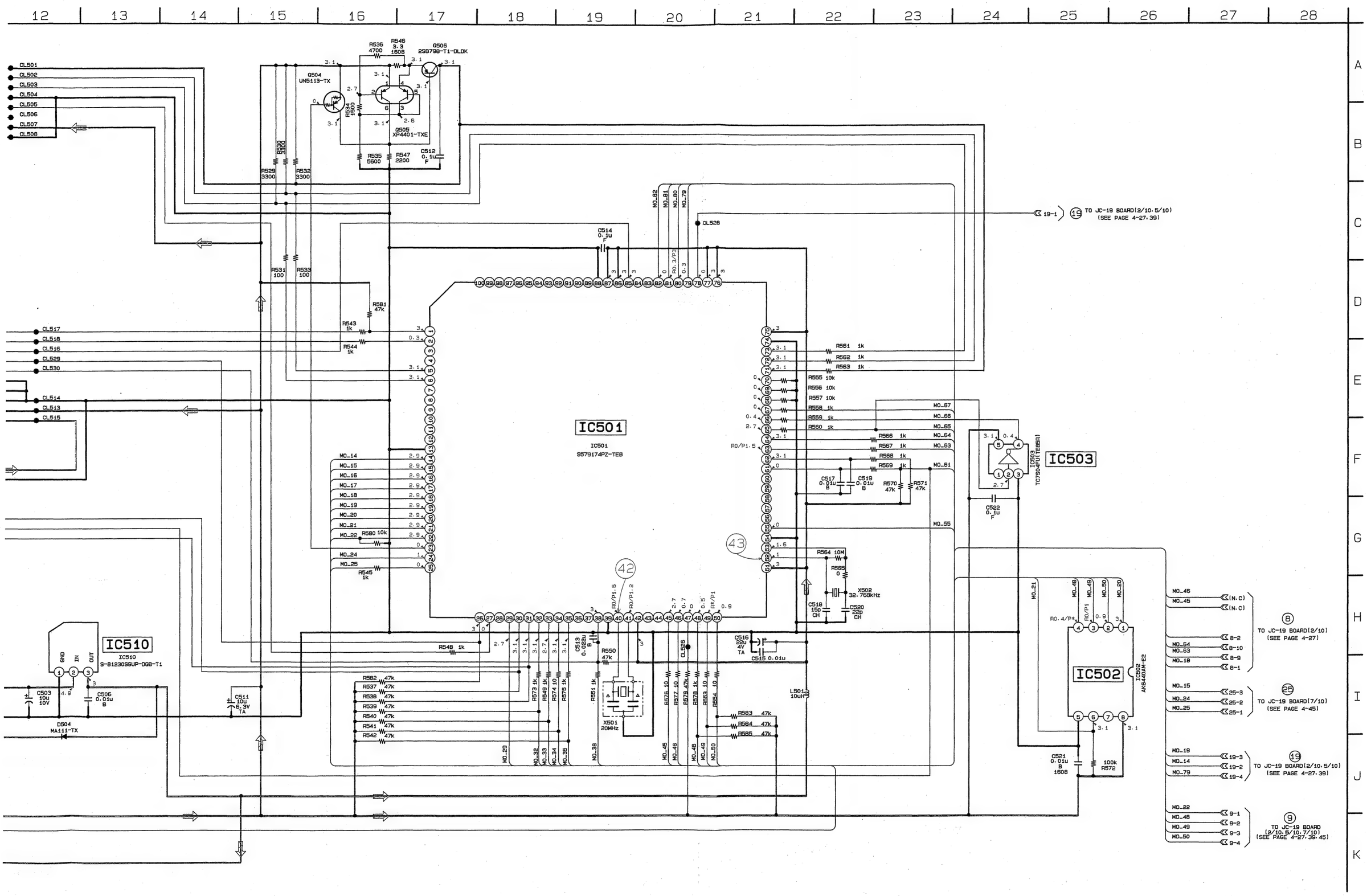
Q501 2SC4081T106R, R524 47k — MO_38
Q502 2SC4081T106R, R526 47k — MO_61

TO JC-19 BOARD(1/10) (SEE PAGE 4-20) 6:
6-16 MO_45, 6-17 MO_46, 6-19 MO_80, 6-20 MO_81
6-15 MO_55, 6-14 MO_67, 6-13 MO_65, 6-18 MO_29, 6-12 MO_16, 6-11 MO_48, 6-10 MO_49, 6-9 MO_50, 6-8 MO_22, 6-7 MO_32, 6-6 MO_33, 6-5 MO_34, 6-4 MO_35

IC511 S-81350HG-KD-T1 (OUT, GND, IN)
D501 MA111-TX
C501 0.01u B, C502 0.01u B, C523 10u 10V

IC510 S-81230SGUP-DQB-T1 (GND, IN, OUT)
C503 10u 10V, C506 0.01u B
D504 MA111-TX

05


IC501
IC501
S579174PZ-TEB
IC503
IC503
TC7S04FU(TE85R)
IC502
IC502
AK6440AM-E2
IC510
IC510
S-81230SGUP-DGB-T1
Q504
UN5113-TX
Q505
XP4401-TXE
Q506
2SB798-T1-DLDK
D504
MA111-TX
X501
20MHz
X502
32.768kHz
L501
10uH
CL501
CL502
CL503
CL504
CL505
CL506
CL507
CL508
CL513
CL514
CL515
CL516
CL517
CL526
CL528
CL529
CL530
R528 3300
R530 3300
R532 3300
R534 1500
R535 5600
R536 4700
R546 3.3 1608
R547 2200
C512 0.1u F
R531 100
R533 100
R581 47k
R543 1k
R544 1k
R545 1k
R580 10k
C514 0.1u F
C513 0.022u B
R548 1k
R550 47k
R551 1k
R582 47k
R537 47k
R538 47k
R539 47k
R540 47k
R541 47k
R542 47k
R573 1k
R549 1k
R574 10
R575 1k
R576 10
R577 10
R578 1k
R579 47k
R583 47k
R584 47k
R585 47k
R554 10
R553 10
C503 10u 10V
C506 0.01u B
C511 10u 6.3V TA
C516 220 4V TA
C515 0.01u
R561 1k
R562 1k
R563 1k
R555 10k
R556 10k
R557 10k
R558 1k
R559 1k
R560 1k
R564 10M
R565 0
C517 0.01u B
C519 0.01u B
R570 47k
R571 47k
R566 1k
R567 1k
R568 1k
R569 1k
C518 150 CH
C520 220 CH
C522 0.1u F
C521 0.01u B 1608
100k R572
MO_82
MO_81
MO_80
MO_79
MO_67
MO_66
MO_65
MO_64
MO_63
MO_61
MO_55
MO_14
MO_15
MO_16
MO_17
MO_18
MO_19
MO_20
MO_21
MO_22
MO_24
MO_25
MO_29
MO_32
MO_33
MO_34
MO_35
MO_38
MO_45
MO_46
MO_48
MO_49
MO_50
MO_21
MO_48
MO_49
MO_50
MO_20
MO_46
MO_45
MO_64
MO_63
MO_18
MO_15
MO_24
MO_25
MO_19
MO_14
MO_79
MO_22
MO_48
MO_49
MO_50
R0/P1.5
R0/P1.2
R0/P1
R0.4/P4
R0.3/P3
IT/P1
42
43
19-1
19
TO JC-19 BOARD(2/10.5/10)
(SEE PAGE 4-27.39)
(N.C)
(N.C)
8-2
8-10
8-9
8-1
8
TO JC-19 BOARD(2/10)
(SEE PAGE 4-27)
25-3
25-2
25-1
25
TO JC-19 BOARD(7/10)
(SEE PAGE 4-45)
19-3
19-2
19-4
19
TO JC-19 BOARD(2/10.5/10)
(SEE PAGE 4-27.39)
9-1
9-2
9-3
9-4
9
TO JC-19 BOARD
(2/10.5/10.7/10)
(SEE PAGE 4-27.39.45)

JC-19 BOARD(7/10)

DV IN/OUT

-REF.NO.:5,000 SERIES-

XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE
*:IMPOSSIBLE TO MEASURE THE VOLTAGE AT THE MARKED POINTS.

FOR CHECK

CN702 XX: GND, J.3.1V, XCS.IND1, MO.SI, MO.SO, MO.SCK, IND1.CNCT, IND1.WKUP, MO.RST, ●C1↑P, N.C, TRCK2, FLTT, TRKT, FLTE, INEPA, IDEC, INEPV, IND15, IND14, IND13, IND12, IND11, IND10, IND9, IND8, IND7, IND6, IND5, IND4, IND3, IND2, IND1, IND0

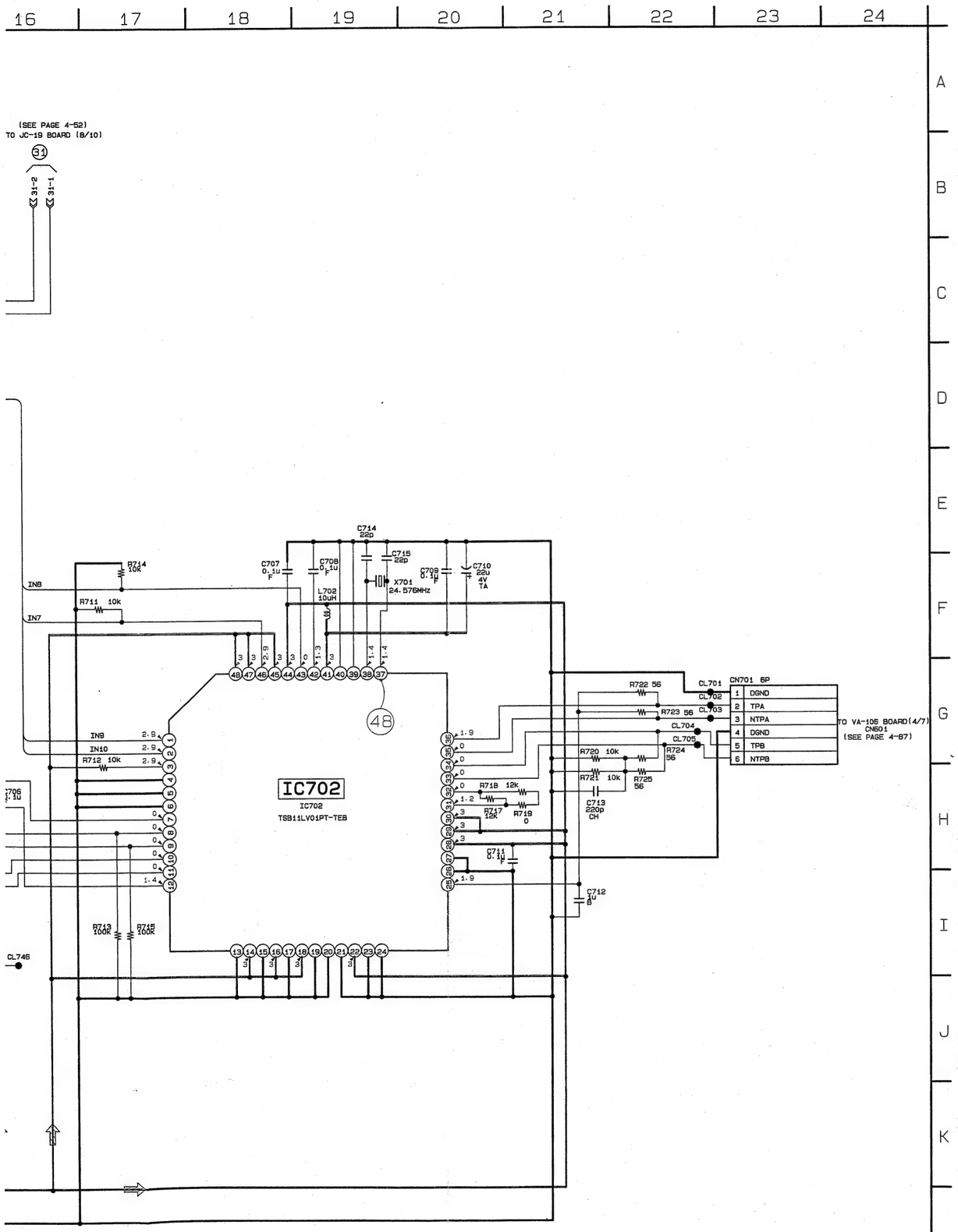
(SEE PAGE 4-18) TO JC-19 BOARD (1/10) ㉖
(SEE PAGE 4-44) TO JC-19 BOARD (6/10) ㉕
(SEE PAGE 4-27,39,44) TO JC-19 BOARD (2/10,5/10,6/10) ⑨
(SEE PAGE 4-34) TO JC-19 BOARD (4/10) ⑱
(SEE PAGE 4-39) TO JC-19 BOARD (5/10) ⑳
(SEE PAGE 4-52) TO JC-19 BOARD (8/10) ㉛

IC703
IC703
HD6433837T855X

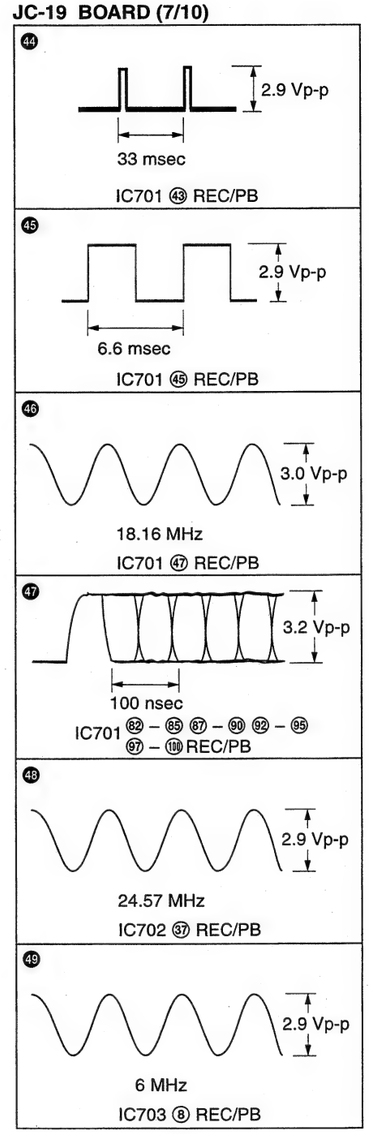
IC701
IC701
CXD2194AR

X702 6MHz

R701 10K
R727 0
R704 10K
R705 10K
C703 0.1u
R703 1M
R702 1K
R726 100k
C702 33p
L703 100uH
C701 10u TA
L701 4.7uH
C704 10u 6.3V TA
C705 0.12
C706 0.1u
R706 1K
R707 100K
R708 0
R709 100K
R710 100K
R711 10k
R712 10k
R713 100K
R714 10k
R715 100K
CL745
CL746

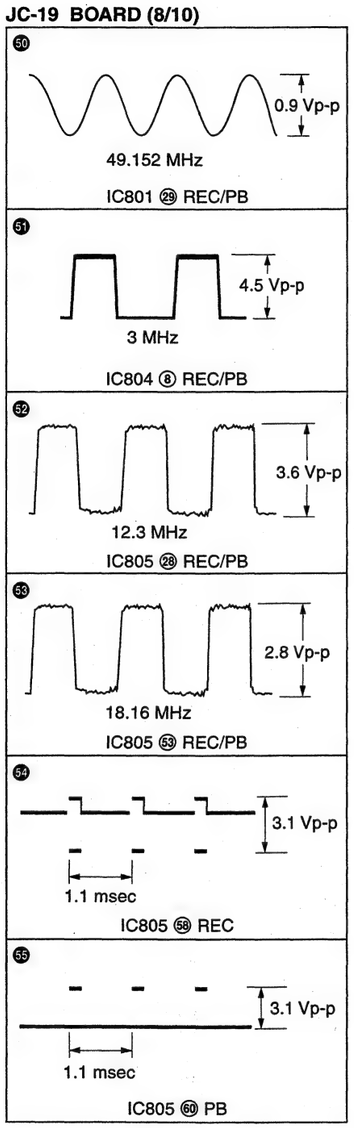


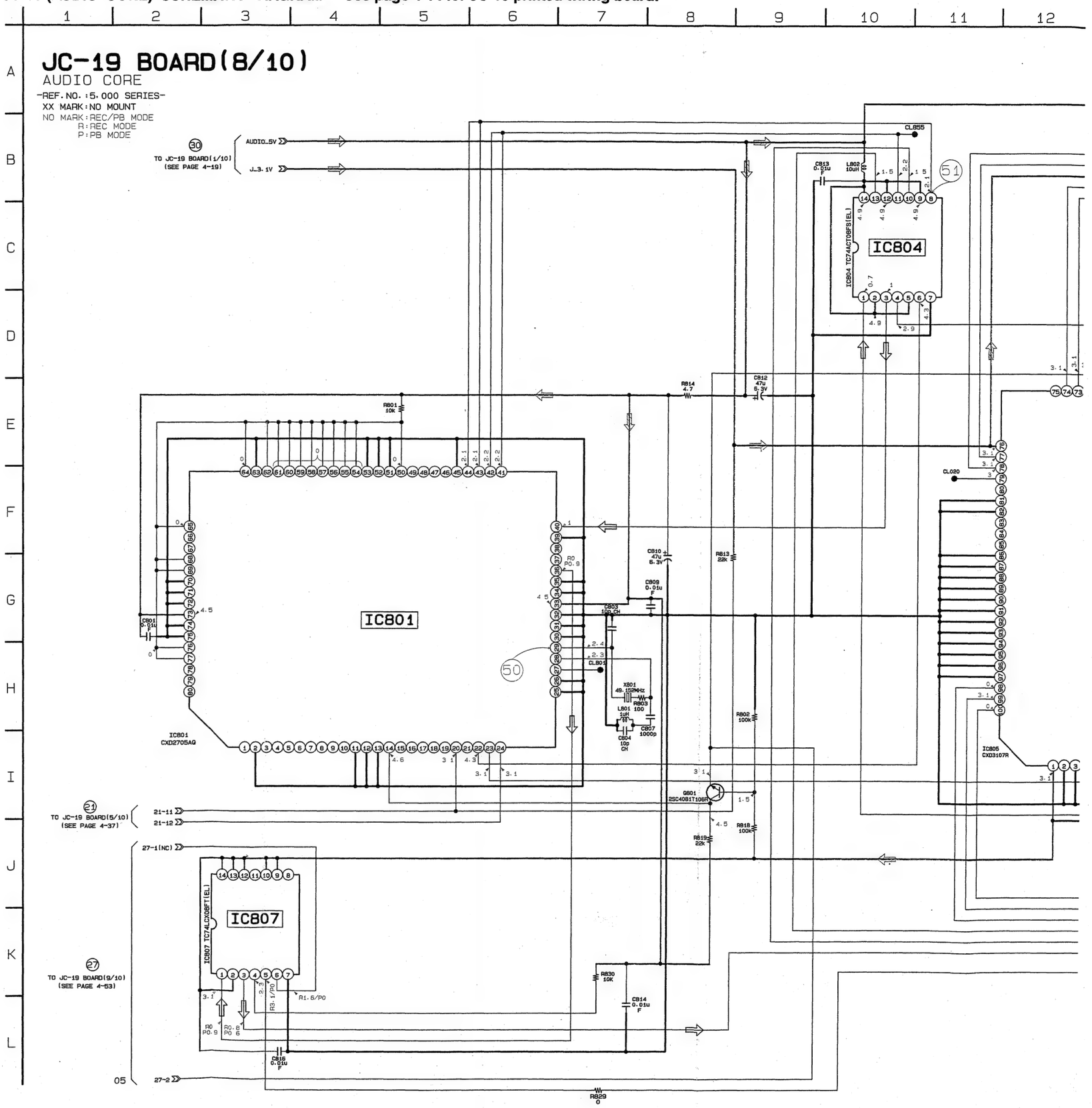
JC-19 BOARD (7/10)



JC-19 (AUDIO CORE) SCHEMATIC DIAGRAM • See page 4-14 for JC-19 printed wiring board.

JC-19 BOARD (8/10)

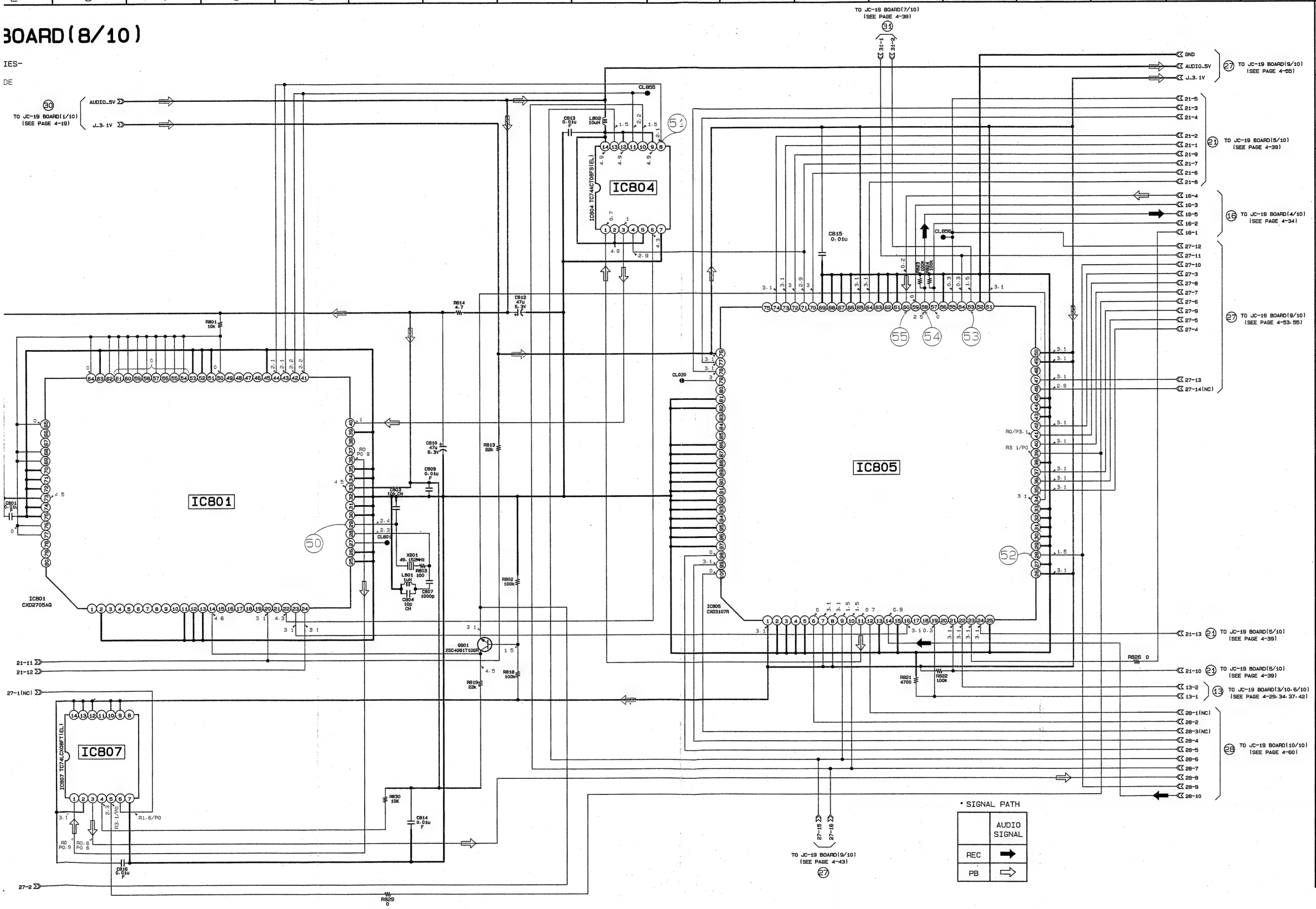




BOARD(8/10)

IES-

DE



JC-19 BOARD(9/10)

DIGITAL AUDIO

-REF.NO.:5.000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
A:REC MODE
P:PB MODE

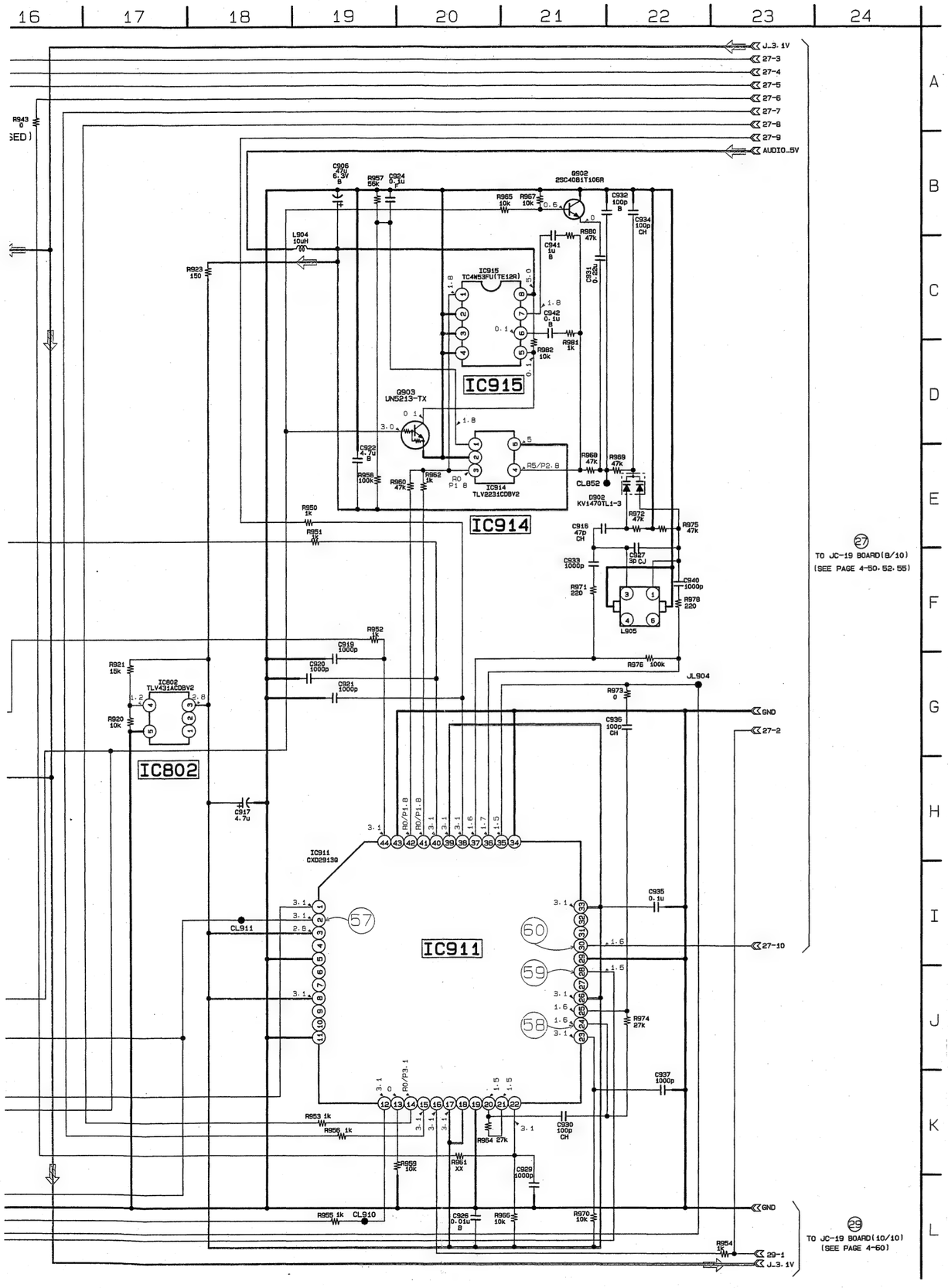
(27) TO JC-19 BOARD(8/10) (SEE PAGE 4-50)

(23) TO JC-19 BOARD(5/10) (SEE PAGE 4-39)

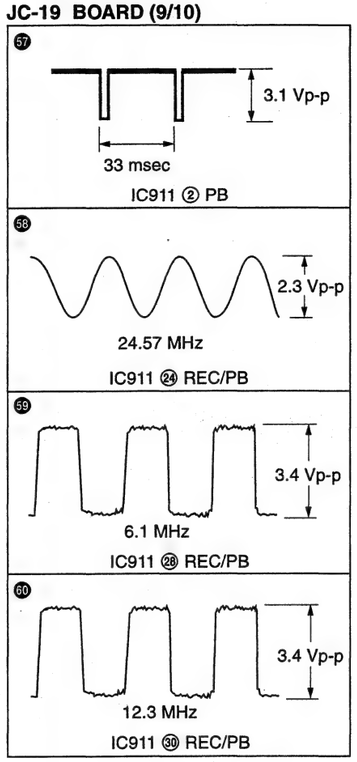
05

IC901 TC74VHC123AFT(EL)
IC902 TC74VHC74FT(EL)
IC903 TC7W74FU(TE12R)
IC904 CDX8630R
IC906 TC74VHC123AFT(EL)
IC907 TC7S08FU(TE85R)
IC908 TC7W08FU(TE12R)
IC909 TC74VHC74FT(EL)
IC916 TC7S08FU(TE85R)
IC802 TLV431ACDBV2

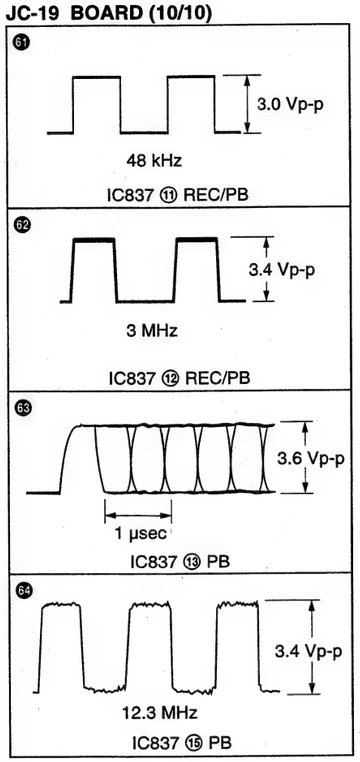
(NOT USED)



JC-19 BOARD (9/10)

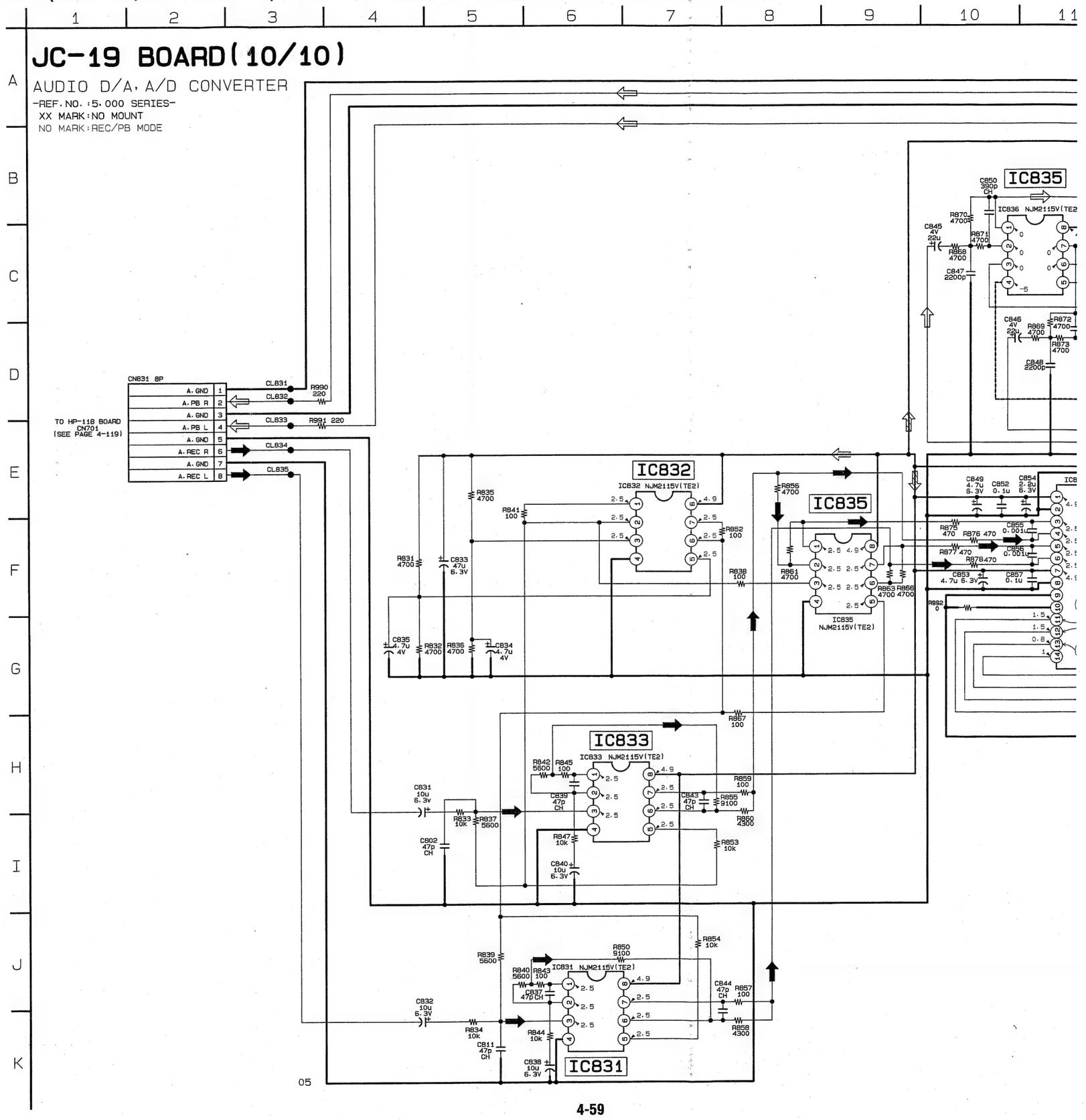


JC-19 BOARD (10/10)



AUDIO D/A, A/D CONVERTER
JC-19 (10/10)

JC-19 (AUDIO D/A, A/D CONVERTER) SCHEMATIC DIAGRAM • See page 4-14 for JC-19 printed wiring board.



BOARD(10/10)

A, A/D CONVERTER
SERIES-
JNT
3 MODE

CN831 8P
A. GND 1
A. PB R 2
A. GND 3
A. PB L 4
A. GND 5
A. REC R 6
A. GND 7
A. REC L 8

IC835 NJM2115V(TE2)
IC838 TK15125MTL
IC840 NJM2115V(TE2)
IC841 TC75S56F(TE85R)
IC832 NJM2115V(TE2)
IC833 NJM2115V(TE2)
IC831 NJM2115V(TE2)
IC837 AK4520A-VF-E2

Q832 UN5111-TX
Q911 UN5211-TX
Q910 UN5211-TX
D903 MA111-TX
D910 MA111-TX

TO JC-19 BOARD(5/10) (SEE PAGE 4-39)
TO JC-19 BOARD(1/10) (SEE PAGE 4-19)
TO JC-19 BOARD(9/10) (SEE PAGE 4-55)
TO JC-19 BOARD(8/10) (SEE PAGE 4-52)
TO JC-19 BOARD(5/10) (SEE PAGE 4-39)

AUDIO_-5V
AUDIO_GND
AUDIO_5V
GND
J_3.1V

• SIGNAL PATH

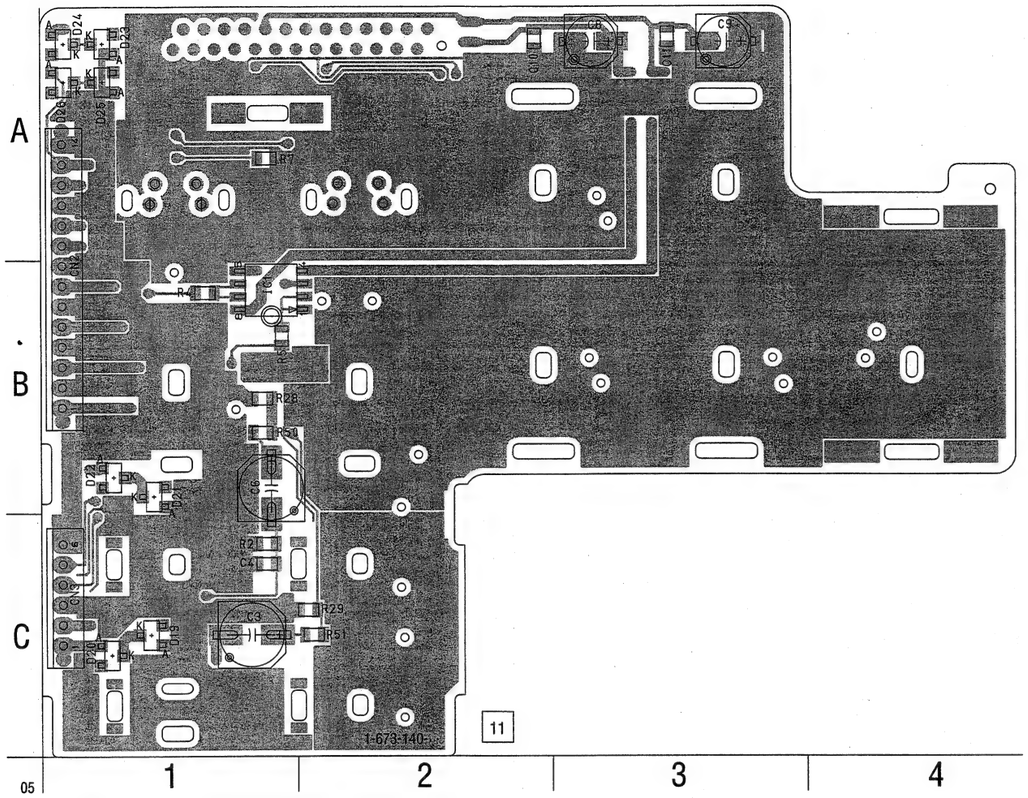
	AUDIO SIGNAL
REC	➡
PB	⇨

RE-33 (V/A IN/OUT), CB-67 (AUDIO OUT) PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAM

– Ref. No.: RE-33 board; 6,000/CB-67 board; 6,000 series –

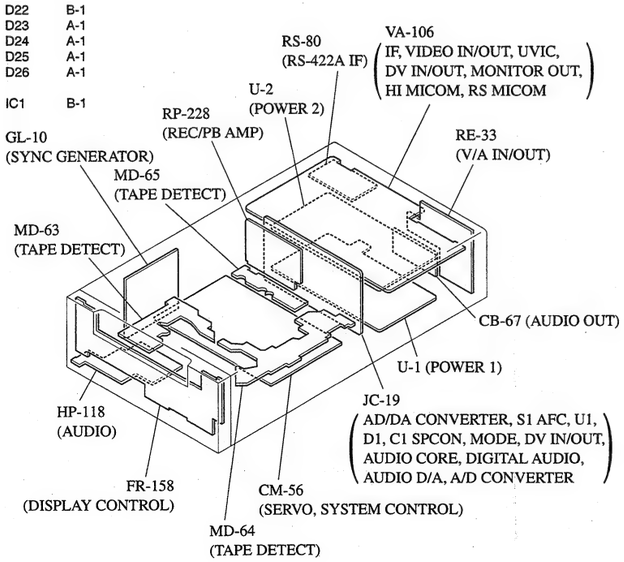
- **For Printed Wiring Board.**
- There are cases that the part isn't mounted in this model is printed on this diagram.

RE-33 BOARD (SIDE A)

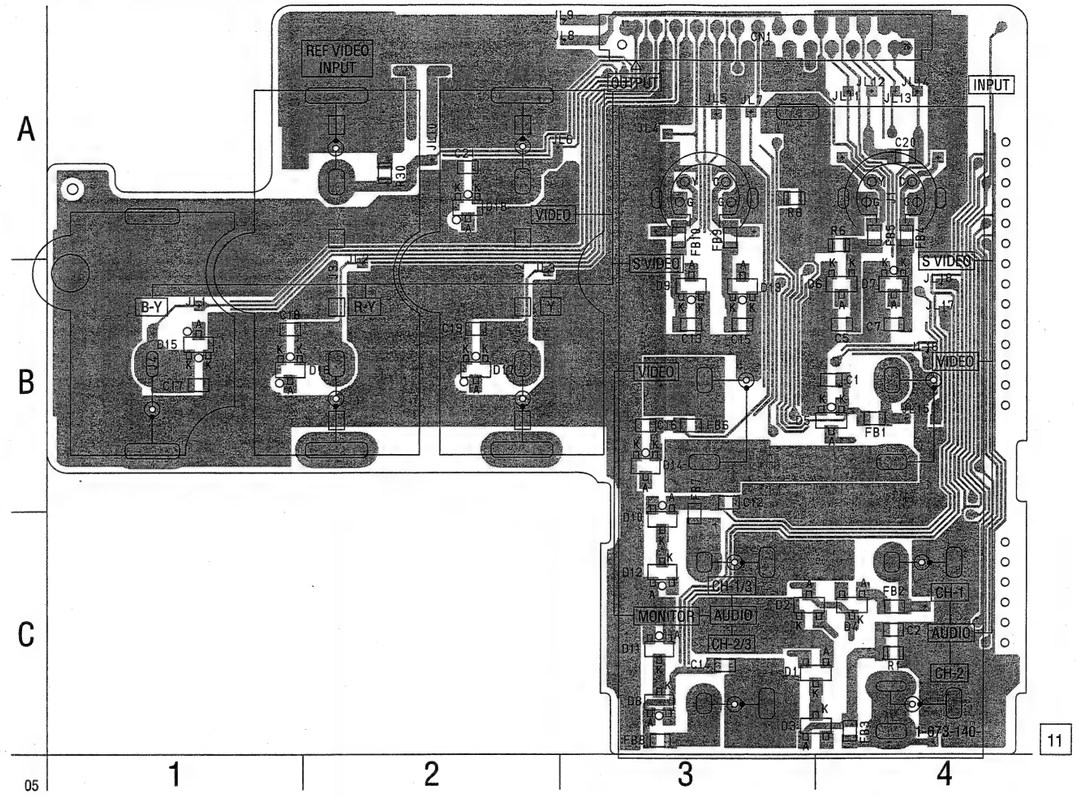


RE-33 BOARD (SIDE A)

CN2	B-1
CN3	C-1
D19	C-1
D20	C-1
D21	B-1
D22	B-1
D23	A-1
D24	A-1
D25	A-1
D26	A-1
IC1	B-1



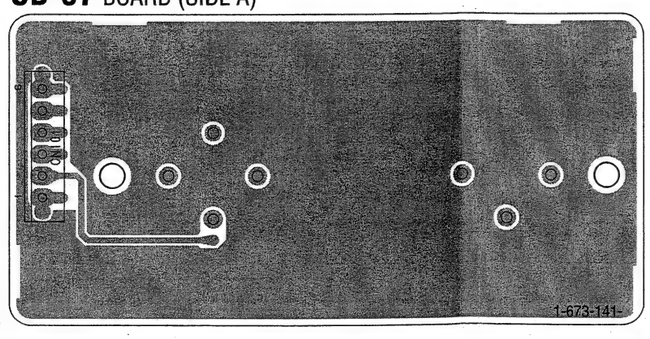
RE-33 BOARD (SIDE B)



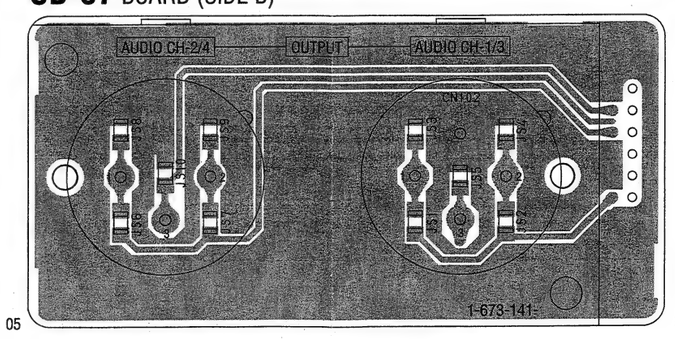
RE-33 BOARD (SIDE B)

CN1	A-3
D1	C-3
D2	C-3
D3	C-3
D4	C-4
D5	B-4
D6	B-4
D7	B-4
D8	C-3
D9	B-3
D10	C-3
D11	C-3
D12	C-3
D13	B-3
D14	B-3
D15	B-1
D16	B-1
D17	B-2
D18	A-2

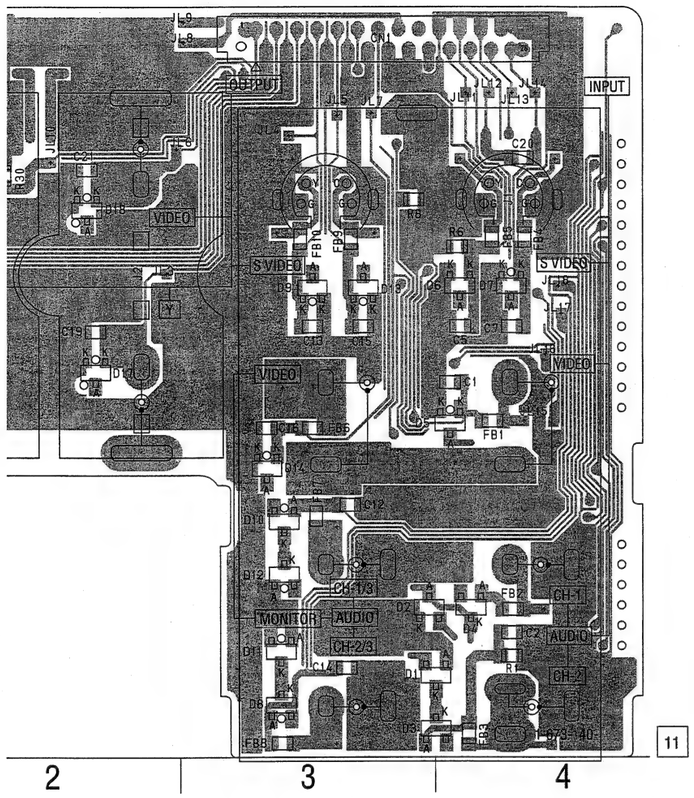
CB-67 BOARD (SIDE A)



CB-67 BOARD (SIDE B)



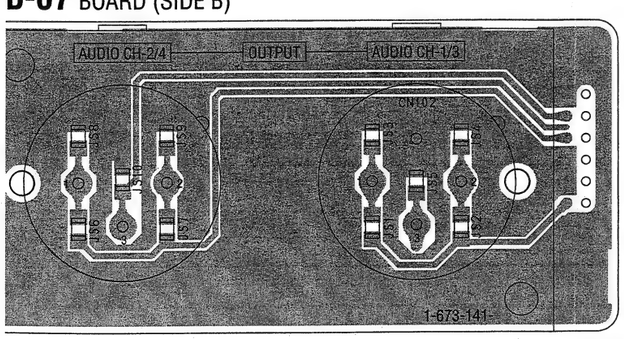
ed in this model is



RE-33 BOARD (SIDE B)

CN1	A-3
D1	C-3
D2	C-3
D3	C-3
D4	C-4
D5	B-4
D6	B-4
D7	B-4
D8	C-3
D9	B-3
D10	C-3
D11	C-3
D12	C-3
D13	B-3
D14	B-3
D15	B-1
D16	B-1
D17	B-2
D18	A-2

B-67 BOARD (SIDE B)



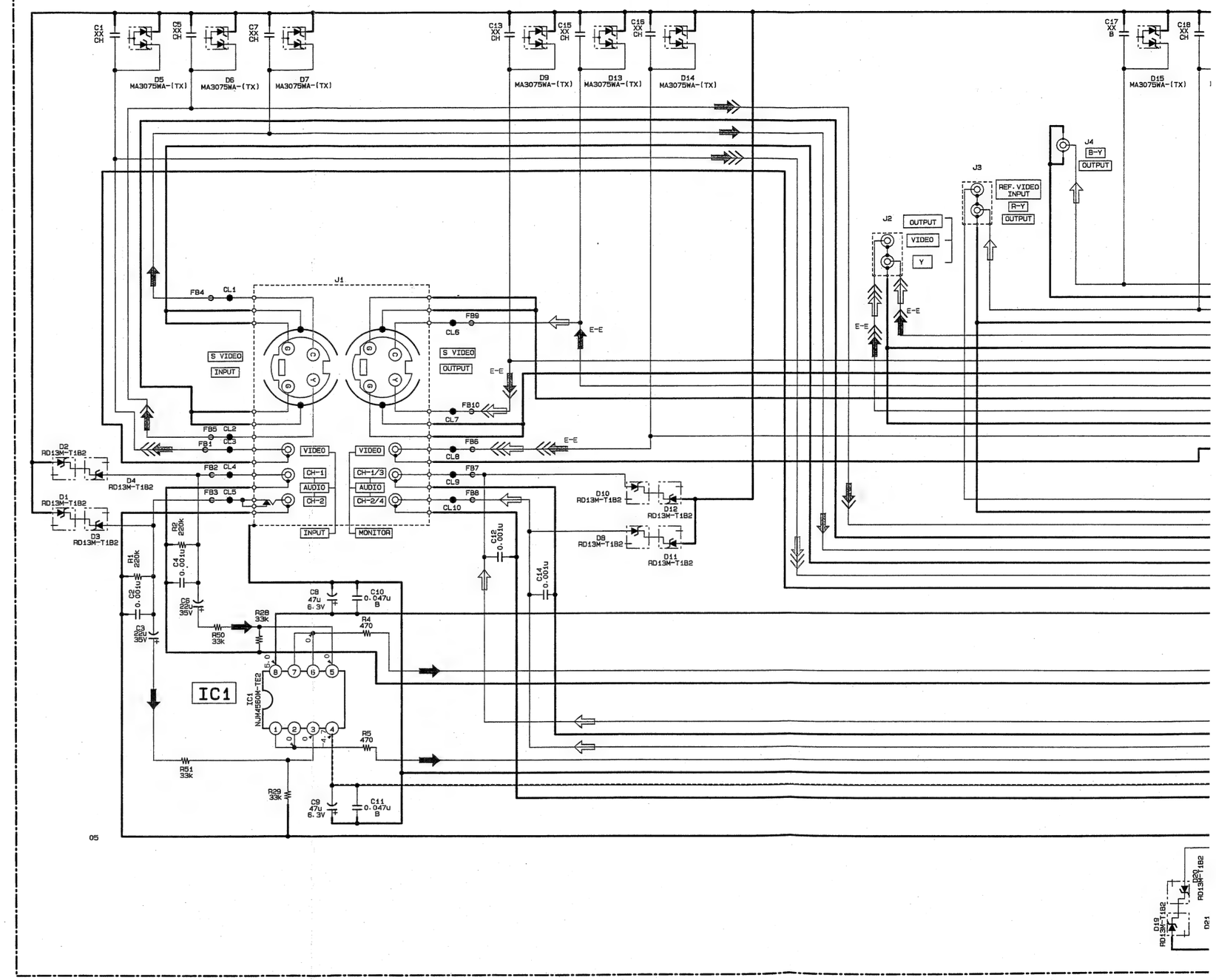
RE-33 BOARD

V/A IN/OUT

-REF. NO. :6,000 SERIES-

XX MARK:NO MOUNT

NO MARK:REC/PB MODE



• SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC	➡	➡	➡	➡
PB	⇨	⇨	⇨	⇨

5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

C13 XX CH
C15 XX CH
C16 XX CH
D9 MA3075WA-(TX)
D13 MA3075WA-(TX)
D14 MA3075WA-(TX)
C17 XX B
C18 XX CH
C19 XX CH
C21 XX B
D15 MA3075WA-(TX)
D16 MA3075WA-(TX)
D17 MA3075WA-(TX)
D18 MA3075WA-(TX)

J4 B-Y OUTPUT
J3 REF. VIDEO INPUT R-Y OUTPUT
J2 OUTPUT VIDEO Y

FB9 CL6
S VIDEO OUTPUT
FB10 CL7
FB6 CL8
FB7 CL9
FB8 CL10
C12 0.001u
C14 0.001u
D10 RD13M-T1B2
D12 RD13M-T1B2
D8 RD13M-T1B2
D11 RD13M-T1B2
C20 0.1u
R30 75
R6 75
R7 75
R8 75

CN1 26P

JL1	1	B-Y_OUT
	2	B-Y_OUT_GND
JL2	3	R-Y_OUT
	4	R-Y_OUT_GND
JL3	5	Y_OUT
	6	Y_OUT_GND
JL4	7	SY_OUT
	8	SY_OUT_GND
JL5	9	SC_OUT
	10	SC_OUT_GND
JL6	11	V_OUT
	12	V_OUT_GND
JL7	13	MONITOR_OUT
	14	MONITOR_OUT_GND
JL8	15	DC+5V
	16	DC_GND
JL9	17	DC-5V
JL10	18	REF_IN
	19	REF_IN_GND
JL11	20	Y_IN
	21	Y_IN_GND
JL12	22	C_IN
	23	C_IN_GND
JL13	24	V_IN
	25	V_IN_GND
JL14	26	SDC DET

TO VA-106 BOARD(3/7) CN401 (SEE PAGE 4-84)

CN2 14P

JL15	1	A. IN_L
	2	GND
JL16	3	A. IN_R
	4	GND
JL17	5	A. OUT_L
	6	GND
JL18	7	A. OUT_R
	8	GND
	9	A. OUT_L. X
	10	A. OUT_L. Y
	11	GND
	12	A. OUT_R. X
	13	A. OUT_R. Y
	14	GND

TO HP-118 BOARD CN201 (SEE PAGE 4-122)

CN3 6P

	1	A. OUT_L. X
	2	A. OUT_L. Y
	3	GND
	4	A. OUT_R. X
	5	A. OUT_R. Y
	6	GND

D19 RD13M-T1B2
D20 RD13M-T1B2
D21 RD13M-T1B2
D22 RD13M-T1B2
D23 RD13M-T1B2
D24 RD13M-T1B2
D25 RD13M-T1B2
D26 RD13M-T1B2

CB-67 BOARD

AUDIO OUT
-REF. NO. : 6,000 SERIES-
XX MARK : NO MOUNT

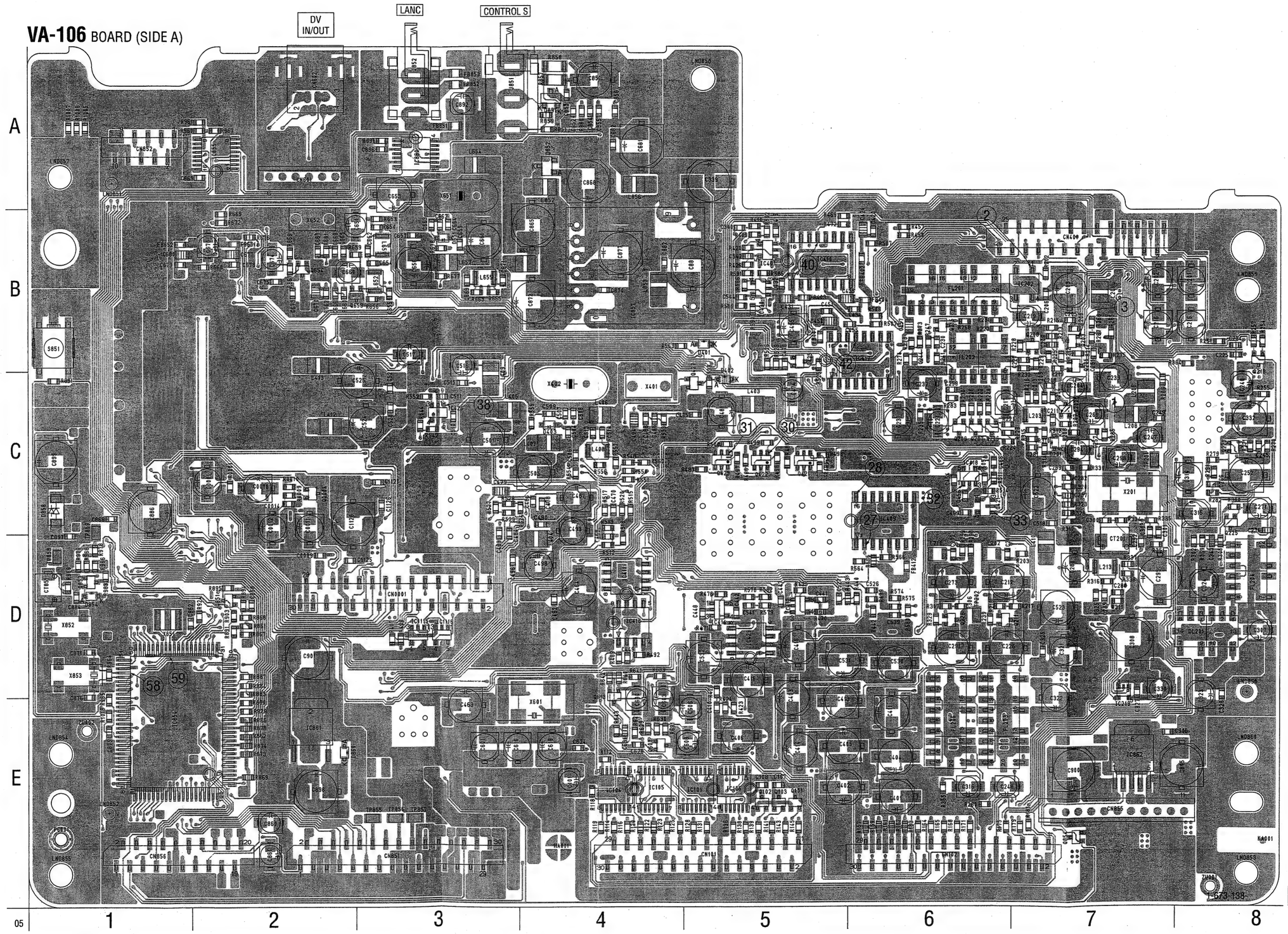
AUDIO OUTPUT
CH-1/3 CH-2/4

CN102 3P
CN103 XX

CN101 6P

A. OUT_L. X	1
A. OUT_L. Y	2
GND	3
A. OUT_R. X	4
A. OUT_R. Y	5
GND	6

JS1 0
JS2 XX
JS3 XX
JS4 0
JS5 XX
JS6 0
JS7 XX
JS8 XX
JS9 0
JS10 XX



VA-106 (IF, VIDEO IN/OUT, UVIC, DV IN/OUT, MONITOR OUT, HI MICOM, RS MICOM) PRINTED WIRING BOARD

– Ref. No.: VA-106 board; 10,000 series –

VA-106 BOARD (SIDE A)

CN0001	D-3
CN101	E-5
CN102	E-6
CN401	B-7
CN601	A-2
CN602	A-2
CN851	E-3
CN852	A-1
CN855	E-7
CN856	E-1
D201	C-7
D401	B-5
D402	B-5
D403	C-4
D651	B-3
D851	A-4
D852	A-4
D854	D-1
D858	C-1
D860	E-2
IC101	E-5
IC104	E-4
IC105	E-4
IC106	E-5
IC202	B-7
IC219	D-7
IC401	B-5
IC409	C-6
IC410	B-5
IC411	D-4
IC413	D-5
IC414	D-5
IC416	D-4
IC417	B-6
IC418	C-6
IC421	C-6
IC426	C-3
IC429	D-5
IC430	B-5
IC854	E-1
IC855	A-2
IC857	B-4
IC860	A-3
IC861	E-2
IC862	E-7
IC1115	D-3
IC1116	D-3
Q0004	C-2
Q101	E-5
Q102	E-5
Q103	E-5
Q202	C-7
Q203	B-7
Q205	B-7
Q206	C-6
Q207	C-6
Q208	B-7
Q209	C-6
Q211	D-6
Q215	B-6
Q218	B-8
Q220	C-8
Q225	C-8
Q228	D-6
Q421	C-5
Q422	C-5
Q423	C-5
Q425	B-5
Q427	B-5
Q607	E-4
Q613	D-4
Q653	B-2
Q654	B-2
Q851	D-2
Q853	D-1
Q854	E-7

GL-10
(SYNC GENERA

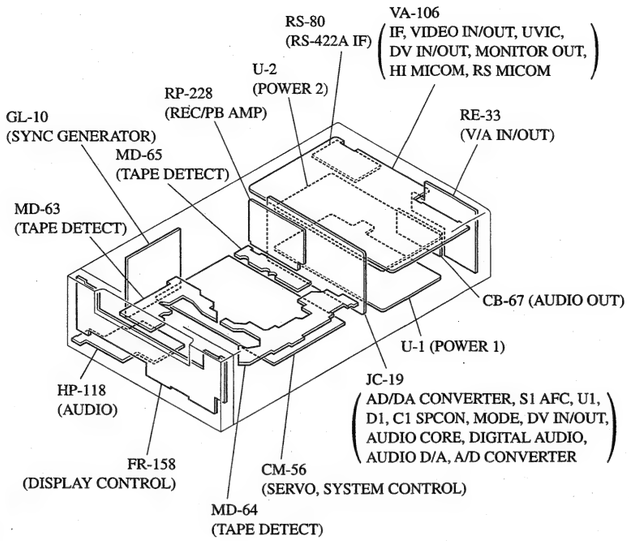
MD-63
(TAPE DETECT

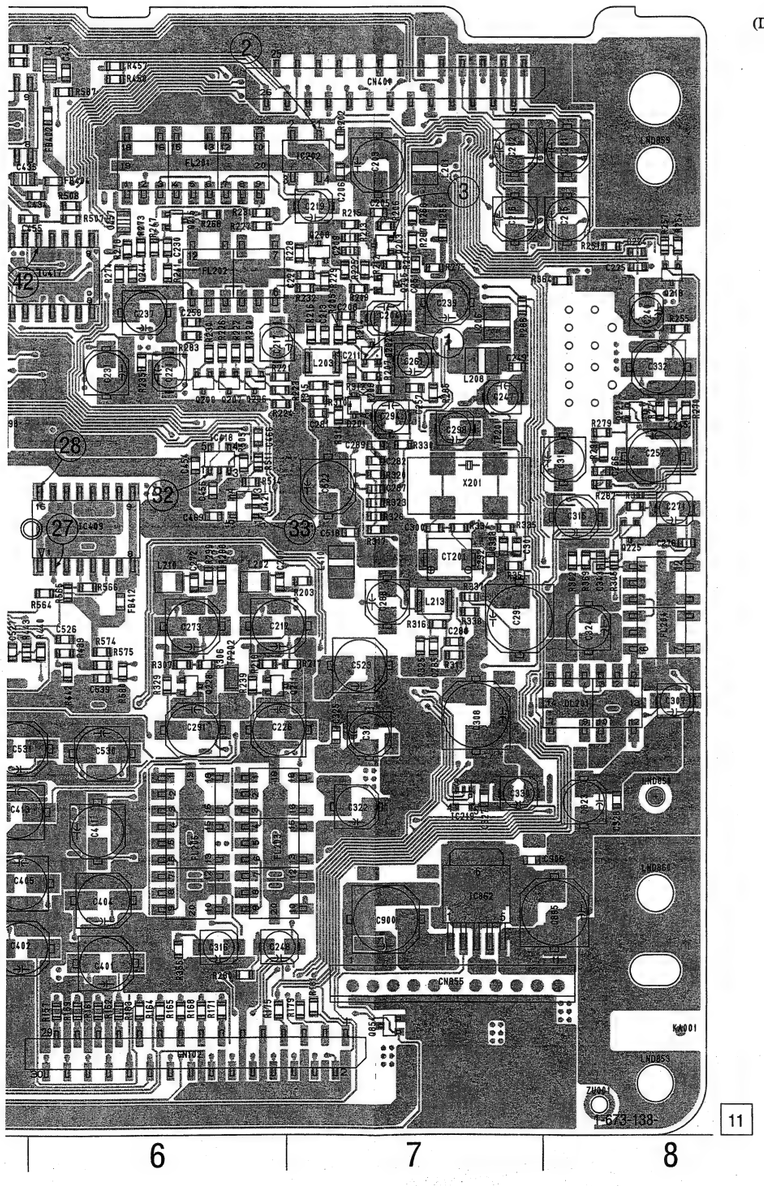
HP-118
(AUDIO)

(DISPLAY CO

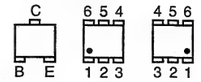
IF, VIDEO IN/OUT, UVIC, DV IN/OUT, MONITOR OUT, HI MICOM, RS MICOM

VA-106

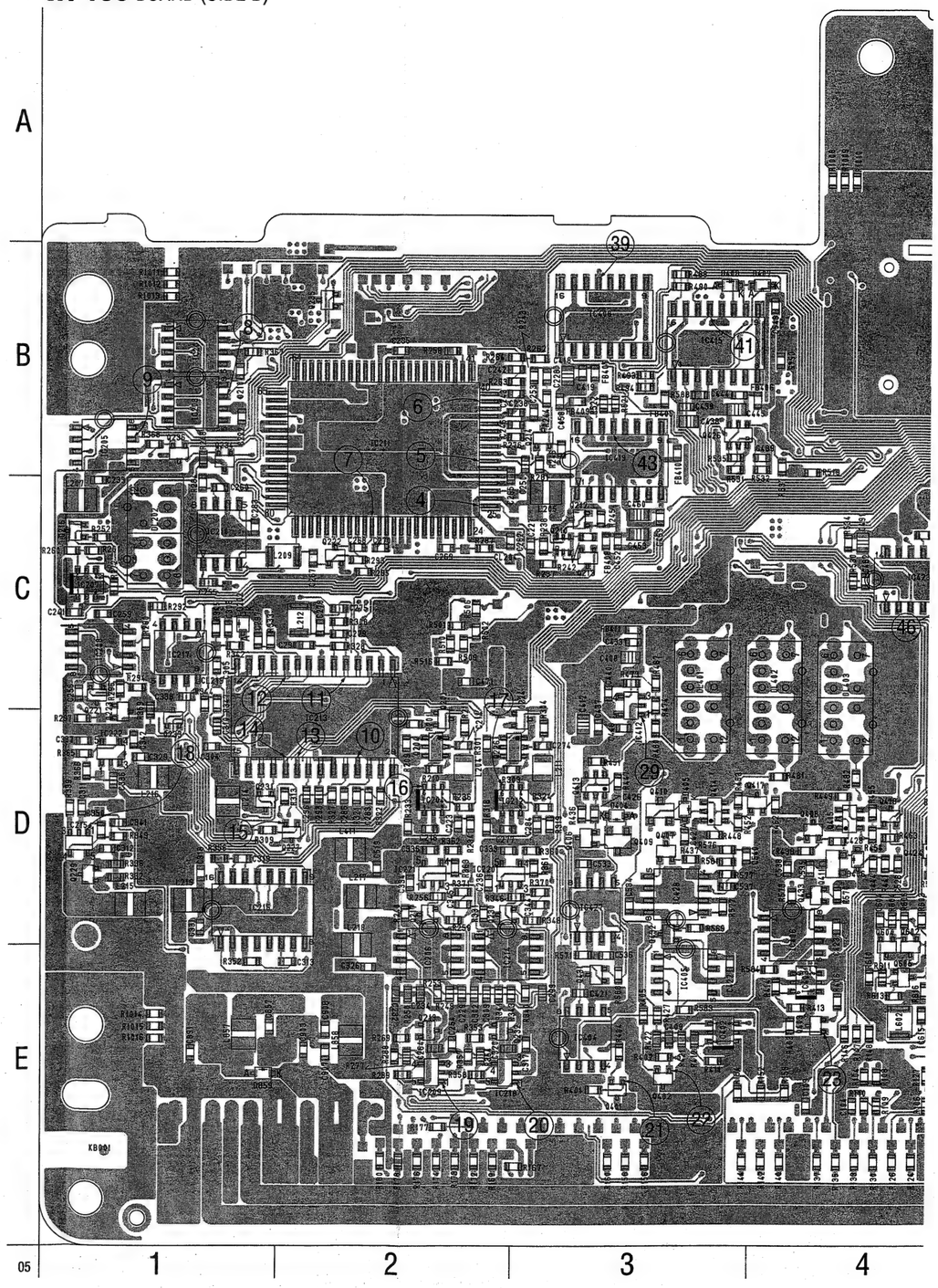




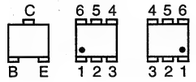
- **For Printed Wiring Board.**
- VA-106 board is 4-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor



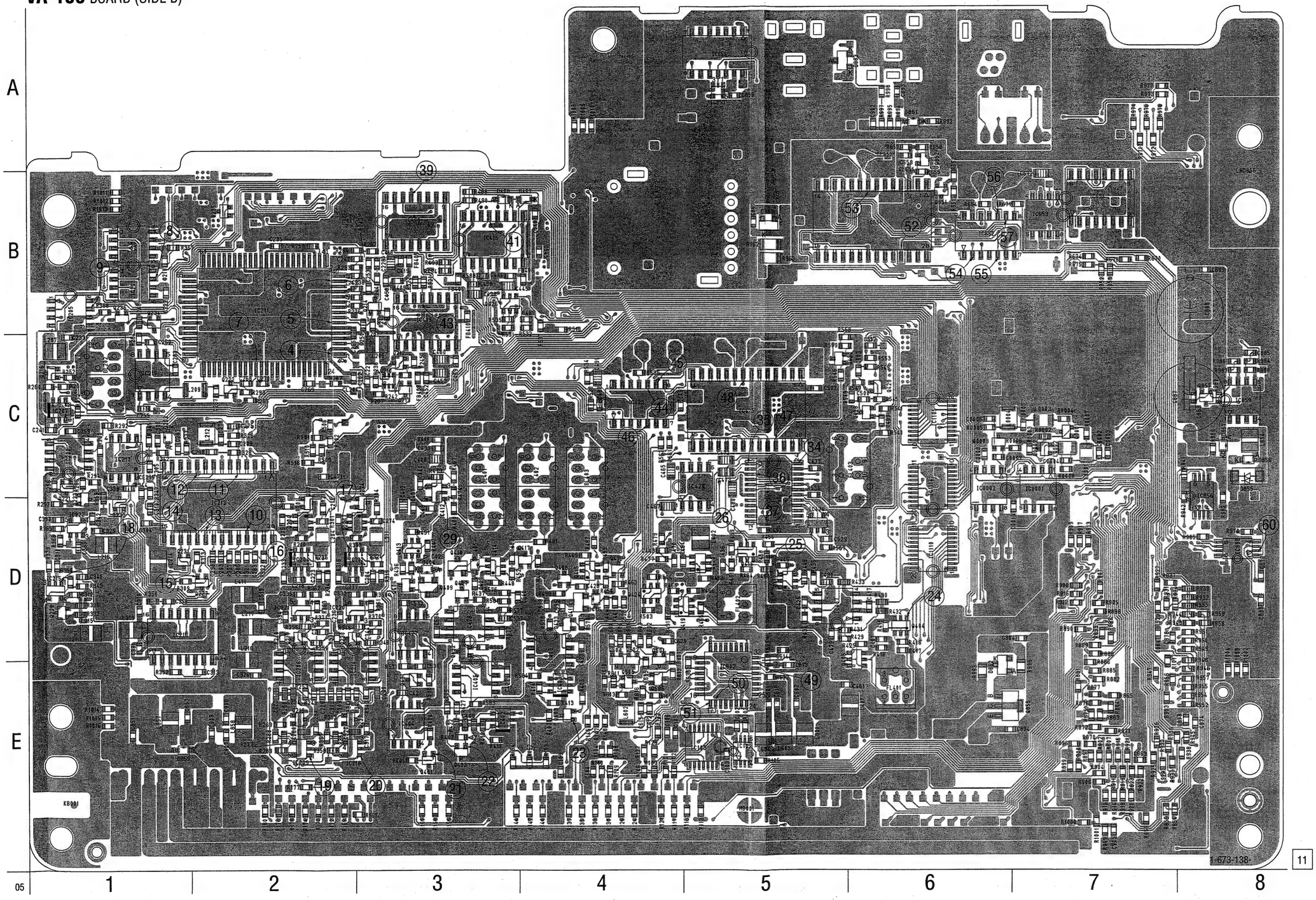
VA-106 BOARD (SIDE B)



- **For Printed Wiring Board.**
- VA-106 board is 4-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor



VA-106 BOARD (SIDE B)



VA-106 BOARD (SIDE B)

D202	C-1	IC1110	D-6
D404	D-3	IC1114	C-6
D405	D-3		
D406	D-4	Q0001	C-7
D407	B-4	Q0002	C-7
D408	B-3	Q0003	C-6
D855	C-8	Q201	C-2
D856	C-8	Q204	D-2
D857	C-8	Q210	C-3
D859	E-1	Q212	C-3
D862	E-6	Q213	C-3
D863	A-5	Q214	B-3
		Q216	C-1
IC0001	C-7	Q217	D-2
IC0002	C-6	Q219	E-2
IC102	E-5	Q221	C-1
IC103	E-5	Q222	C-2
IC201	B-1	Q223	D-1
IC203	B-1	Q224	D-3
IC204	D-2	Q226	D-3
IC205	B-1	Q227	D-2
IC206	E-2	Q229	D-1
IC207	C-1	Q230	D-3
IC208	C-1	Q231	D-1
IC209	E-2	Q232	E-2
IC210	C-1	Q233	D-1
IC211	B-2	Q234	B-1
IC212	D-2	Q235	B-2
IC213	D-2	Q236	B-1
IC 214	E-2	Q401	E-3
IC215	D-1	Q402	E-3
IC216	D-1	Q403	E-4
IC217	C-1	Q404	D-6
IC218	E-2	Q405	D-6
IC220	D-2	Q406	D-3
IC221	D-2	Q407	D-3
IC222	D-1	Q408	D-4
IC402	E-3	Q409	D-3
IC403	E-4	Q410	D-3
IC404	E-3	Q411	D-4
IC405	E-3	Q412	D-5
IC406	D-4	Q413	D-3
IC407	D-5	Q414	D-3
IC408	B-3	Q415	D-4
IC412	D-3	Q416	D-5
IC415	B-3	Q417	D-4
IC419	B-3	Q418	D-4
IC420	C-5	Q419	D-4
IC422	C-5	Q420	D-5
IC423	C-4	Q426	B-3
IC424	D-5	Q428	C-6
IC425	C-5	Q429	C-6
IC427	D-3	Q430	C-5
IC428	D-3	Q431	E-3
IC602	E-5	Q432	D-3
IC651	B-6	Q433	D-4
IC652	B-6	Q601	D-4
IC653	B-7	Q602	D-4
IC654	B-7	Q604	D-4
IC851	A-5	Q605	E-4
IC853	A-5	Q606	E-4
IC856	C-8	Q651	B-6
IC858	D-8	Q652	A-6
IC859	C-8	Q852	C-8
IC1105	C-6	Q855	E-6

VA-106 (IF) SCHEMATIC DIAGRAM

VA-106 BOARD(1/7)

IF

-REF.NO.:10.000 SERIES-

XX MARK:NO MOUNT

NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE

TO JC-19 BOARD(1/10)
CN103
(SEE PAGE 4-20)

TO JC-19 BOARD(1/10)
CN104
(SEE PAGE 4-19)

IC101 TC74VHC08FT(EL)

IC102 TC7W125FU-TE12R

IC103 TC74VHC125FT(EL)

IC104 TC74VHCT08AFT(EL)

IC105 TC74VHCT08AFT(EL)

IC106 TC74VHCT08AFT(EL)

Q103 UNS211-TX

Q102 UNS211-TX

Q101 UNS211-TX

TO VA-106 BOARD(6/7) (SEE PAGE 4-92.94)

TO VA-106 BOARD(4/7) (SEE PAGE 4-88)

TO VA-106 BOARD(3/7) (SEE PAGE 4-84)

TO VA-106 BOARD(7/7) (SEE PAGE 4-96)

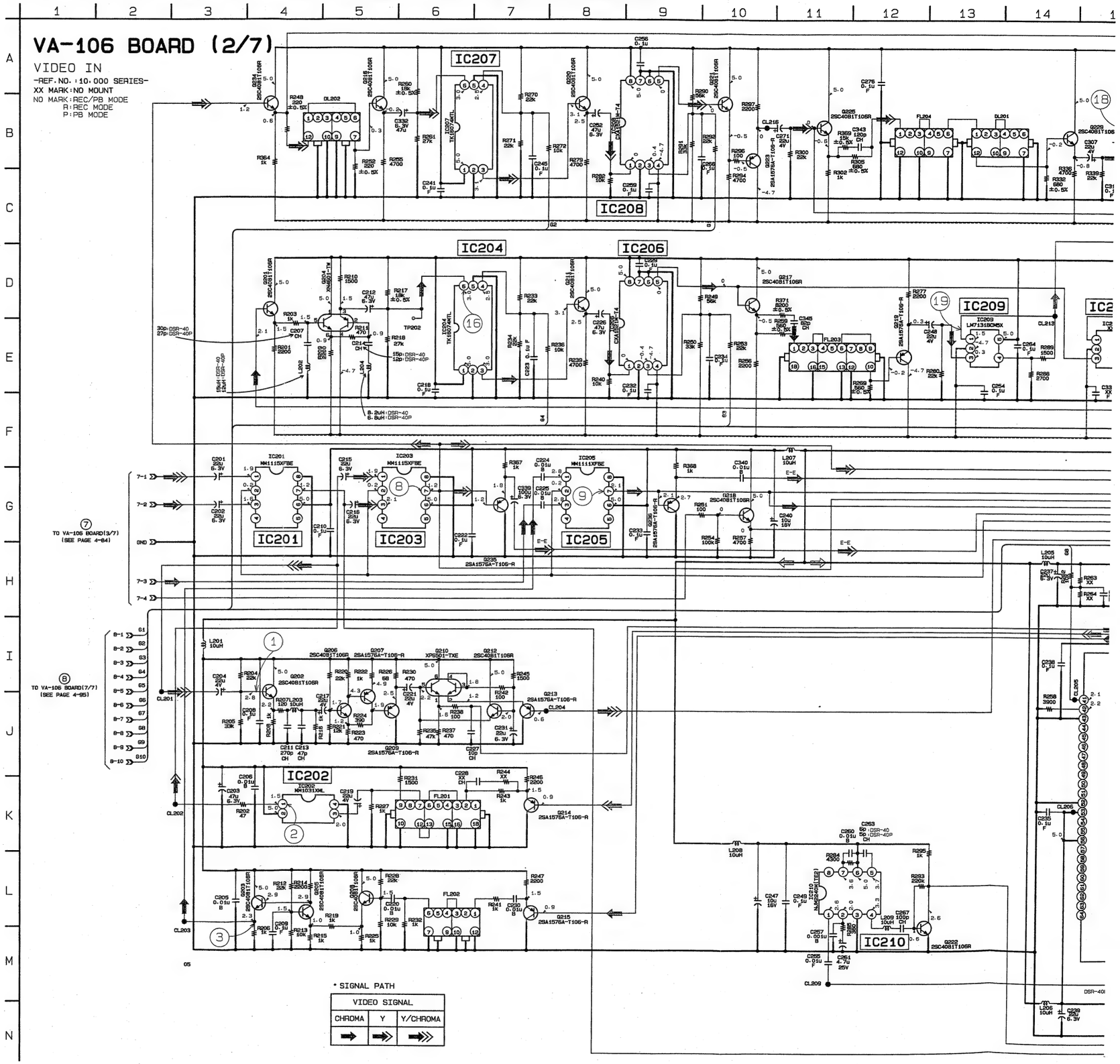
TO VA-106 BOARD(3/7) (SEE PAGE 4-81)

TO VA-106 BOARD(2/7) (SEE PAGE 4-78)

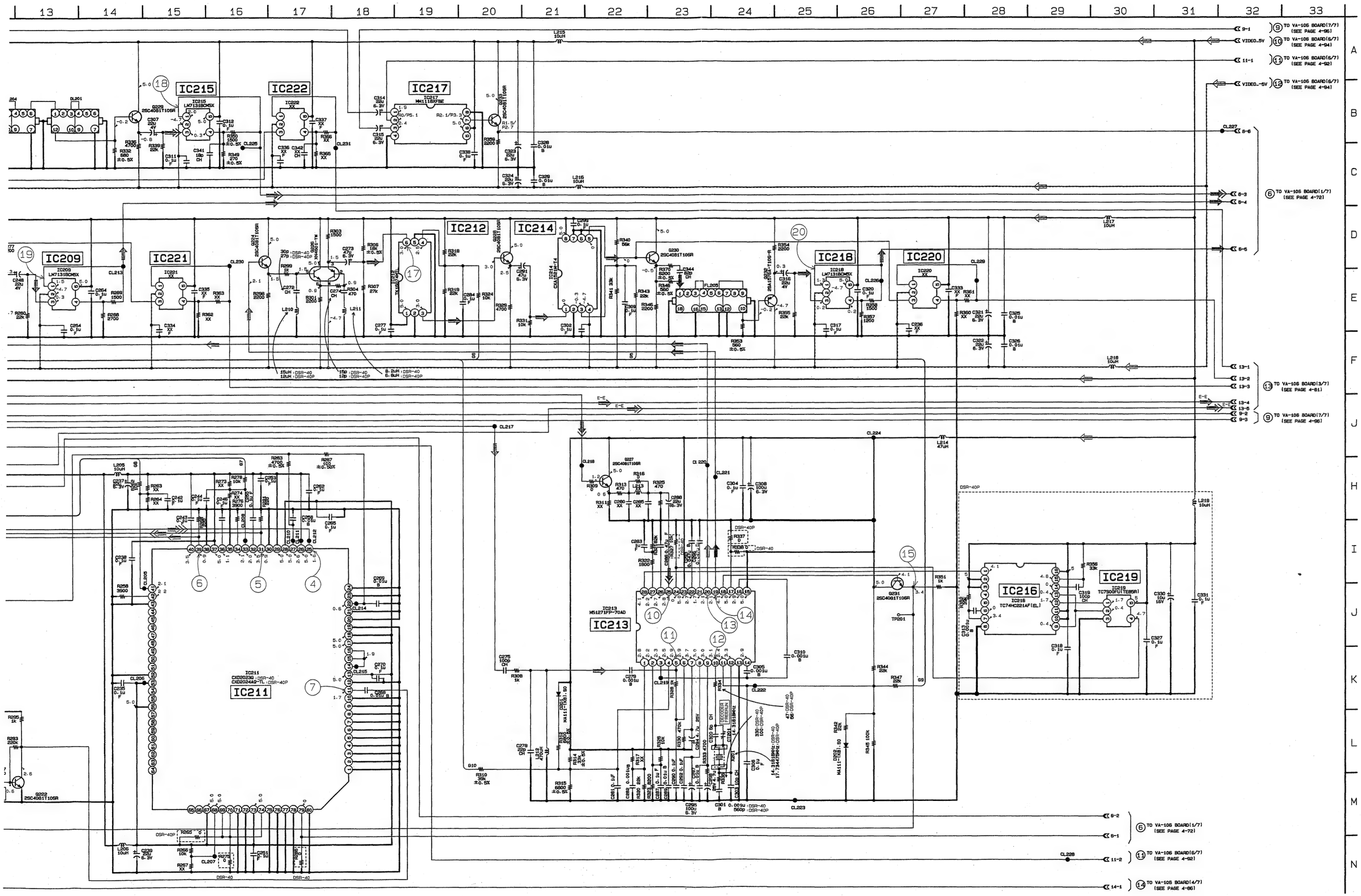
• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	⇒	⇒	
PB	⇨	⇨	

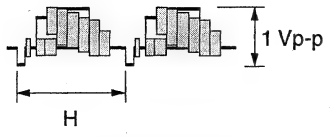
VA-106 (VIDEO IN) SCHEMATIC DIAGRAM • See page 4-66 for VA-106 printed wiring board.



VIDEO IN
VA-106 (2/7)


IC209
IC221
IC222
IC215
IC217
IC212
IC214
IC218
IC220
IC216
IC219
IC213
IC211
9-1
VIDEO..5V
11-1
VIDEO..-5V
6-6
6-3
6-4
6-5
13-1
13-2
13-3
13-4
13-5
9-2
9-3
6-2
6-1
11-2
14-1
TO VA-105 BOARD(7/7) (SEE PAGE 4-96)
TO VA-105 BOARD(6/7) (SEE PAGE 4-94)
TO VA-105 BOARD(6/7) (SEE PAGE 4-92)
TO VA-105 BOARD(6/7) (SEE PAGE 4-94)
TO VA-105 BOARD(1/7) (SEE PAGE 4-72)
TO VA-105 BOARD(3/7) (SEE PAGE 4-81)
TO VA-105 BOARD(7/7) (SEE PAGE 4-96)
TO VA-105 BOARD(1/7) (SEE PAGE 4-72)
TO VA-105 BOARD(6/7) (SEE PAGE 4-92)
TO VA-105 BOARD(4/7) (SEE PAGE 4-86)

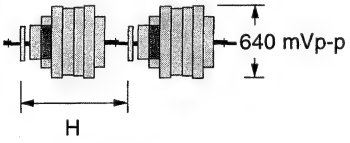
VA-106 BOARD (2/7)

❶


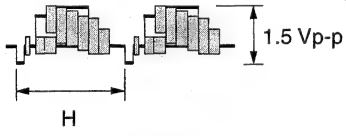
Q202 B REC

❷


IC202 ① REC

❸


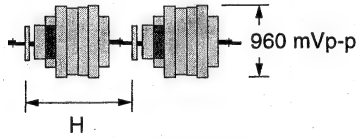
Q203 E REC

❹


IC211 ㉕ REC

❺


IC211 ㉛ REC

❻


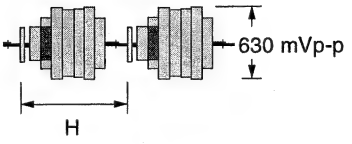
IC211 ㊴ REC

❼

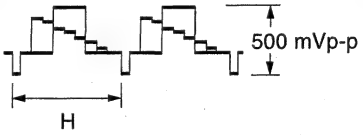

DSR-40: 14.32 MHz
DSR-40P: 17.73 MHz
IC211 ⑪ REC/PB

❽

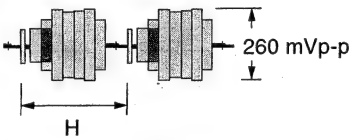

IC203 ⑦ REC

❾


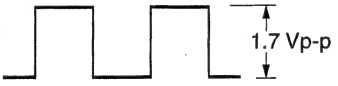
IC205 ⑦ REC

❿


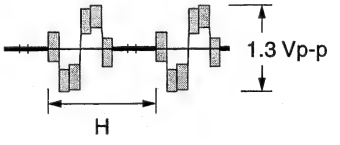
IC213 ㉕ REC

⓫


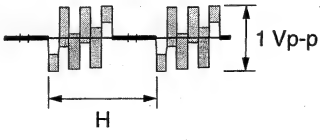
IC213 ⑤ REC

⓬


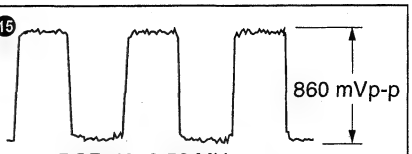
DSR-40: 14.32 MHz
DSR-40P: 17.73 MHz
IC213 ⑩ REC/PB

⓭


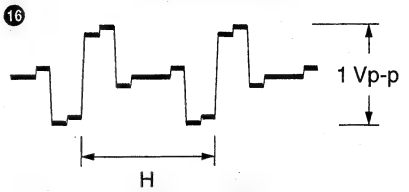
IC213 ⑳ REC

⓮


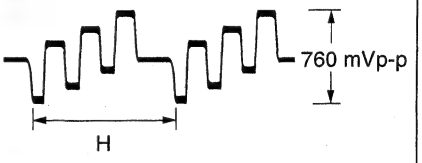
IC213 ⑲ REC

⓯


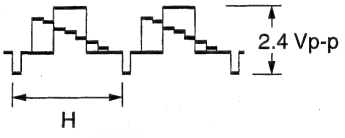
DSR-40: 3.58 MHz
DSR-40P: 4.43 MHz
Q231 E REC/PB

⓰


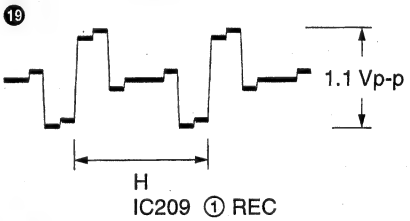
IC204 ⑥ REC

⓱


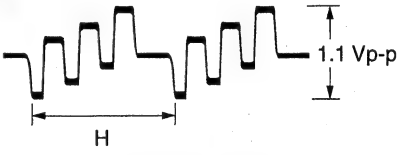
IC212 ⑥ REC

⓲


IC215 ① REC

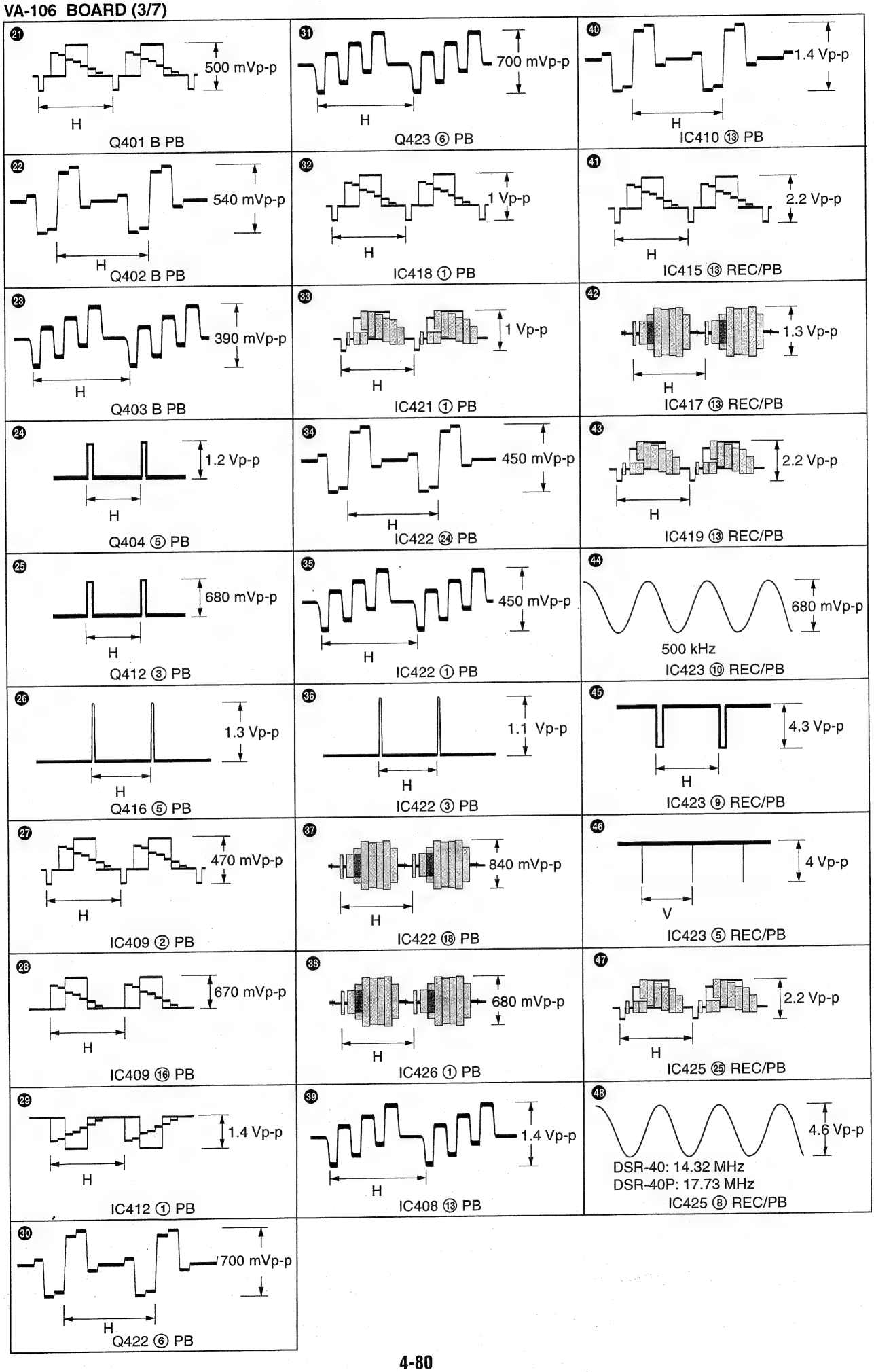
⓳


IC209 ① REC

⓴


IC218 ① REC

VA-106 BOARD (3/7)



VA-106 BOARD(3/7)

VIDEO OUT

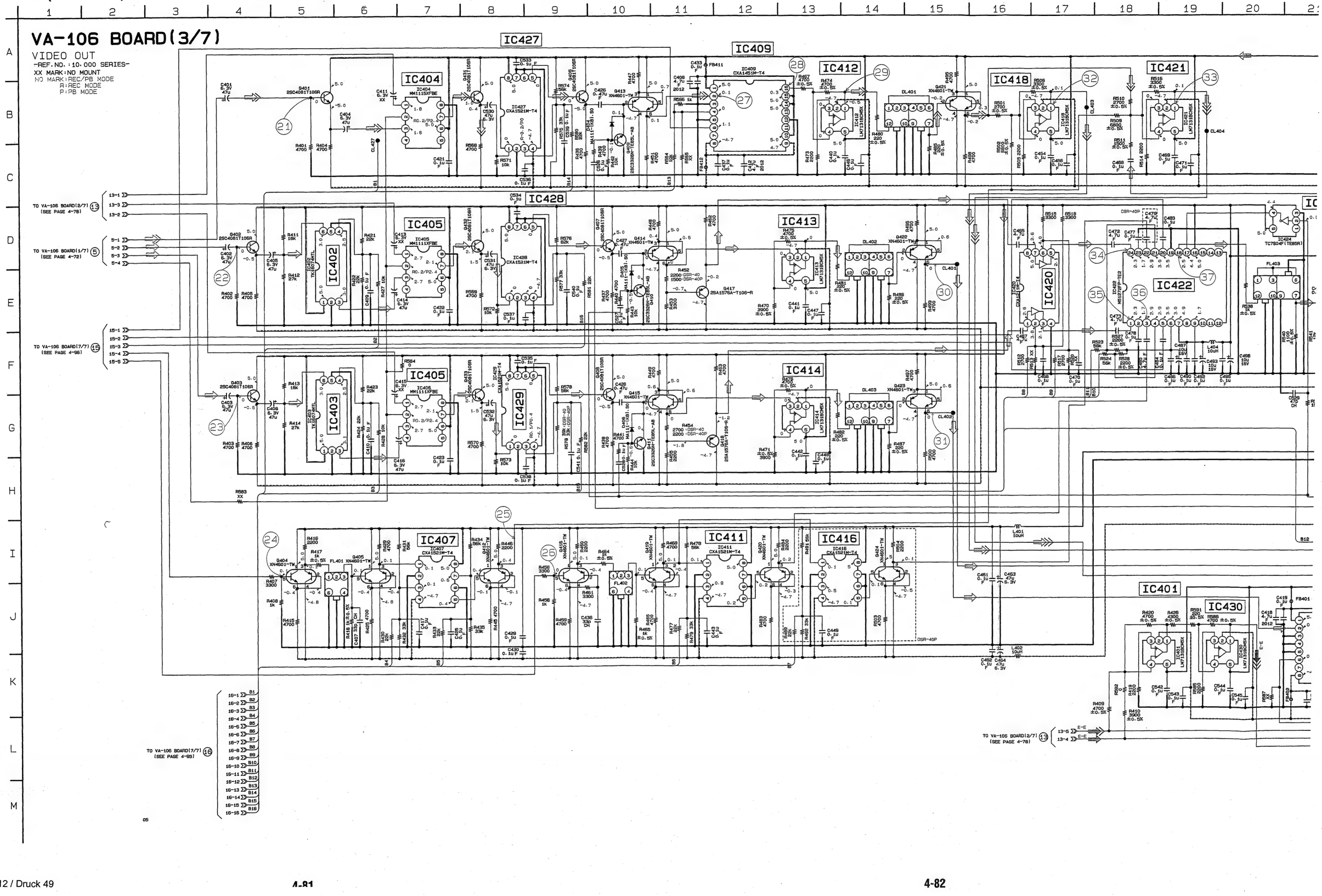
-REF.NO.:10.000 SERIES-

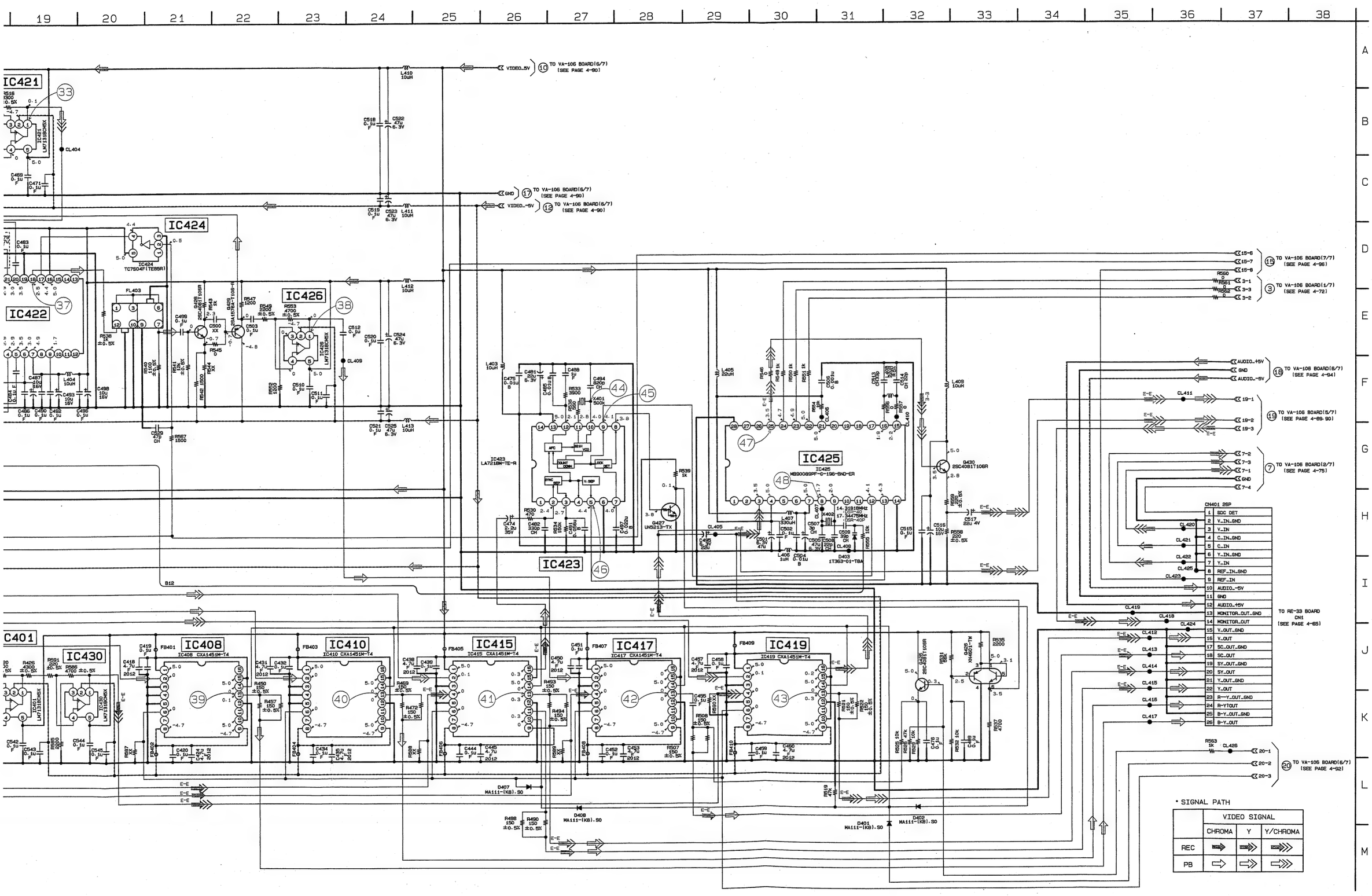
XX MARK:NO MOUNT

NO MARK:REC/PB MODE

R:REC MODE

P:PB MODE





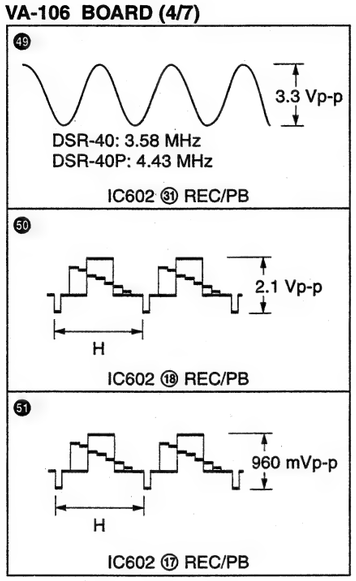
* SIGNAL PATH

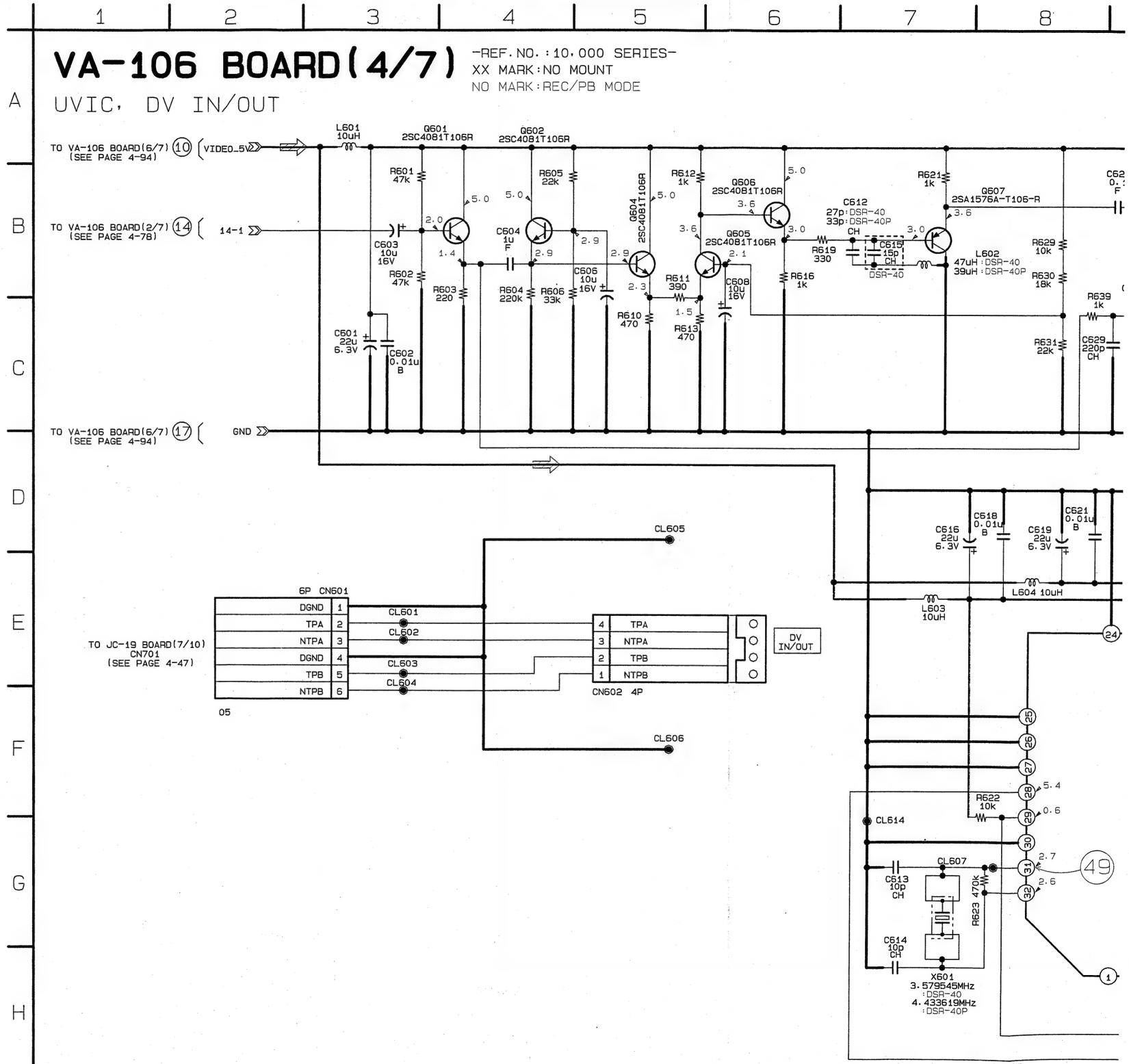
	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	⇨	⇨	⇨
PB	⇨	⇨	⇨

VIDEO OUT
VA-106 (3/7)

VA-106 (UVIC, DV IN/OUT) SCHEMATIC DIAGRAM • **See page 4-66 for VA-106 printed wiring board.**

VA-106 BOARD (4/7)





UVIC, DV IN/OUT
VA-106 (4/7)

2 3 4 5 6 7 8 9 10 11 12 13

06 BOARD(4/7)

-REF. NO. : 10,000 SERIES-
XX MARK : NO MOUNT
NO MARK : REC/PB MODE

)V IN/OUT

(7) (10) { VIDEO_5V
(7) (14) { 14-1
(7) (17) { GND

L601 10uH
Q601 2SC4081T106R
Q602 2SC4081T106R
Q604 2SC4081T106R
Q605 2SC4081T106R
Q606 2SC4081T106R
Q607 2SA1576A-T106-R
Q613 2SA1576A-T106-R

R601 47k
R602 47k
R603 220
R604 220k
R605 22k
R606 33k
R610 470
R611 390
R612 1k
R613 470
R616 1k
R619 330
R621 1k
R622 10k
R623 470k
R629 10k
R630 18k
R631 22k
R636 10k
R639 1k
R640 47k
R641 47k
R642 1k
R643 100k

C601 22u 6.3V
C602 0.01u B
C603 10u 16V
C604 1u F
C606 10u 16V
C608 10u 16V
C612 27p:DSR-40 33p:DSR-40P CH
C615 15p CH DSR-40
C616 22u 6.3V
C618 0.01u B
C619 22u 6.3V
C621 0.01u B
C624 0.1u F
C628 0.1u F
C629 220p CH
C630 10u 16V
C631 0.1u F
C613 10p CH
C614 10p CH

L602 47uH:DSR-40 39uH:DSR-40P
L603 10uH
L604 10uH

X601 3.579545MHz :DSR-40 4.433619MHz :DSR-40P

IC602 MC68HC68VBIFB
IC602

CL601 CL602 CL603 CL604 CL605 CL606 CL607 CL608 CL609 CL614

6P CN601
DGND 1
TPA 2
NTPA 3
DGND 4
TPB 5
NTPB 6

CN602 4P
4 TPA
3 NTPA
2 TPB
1 NTPB

DV IN/OUT

ARD(7/10)
1
= 4-47)

05

(50) (51) (49)

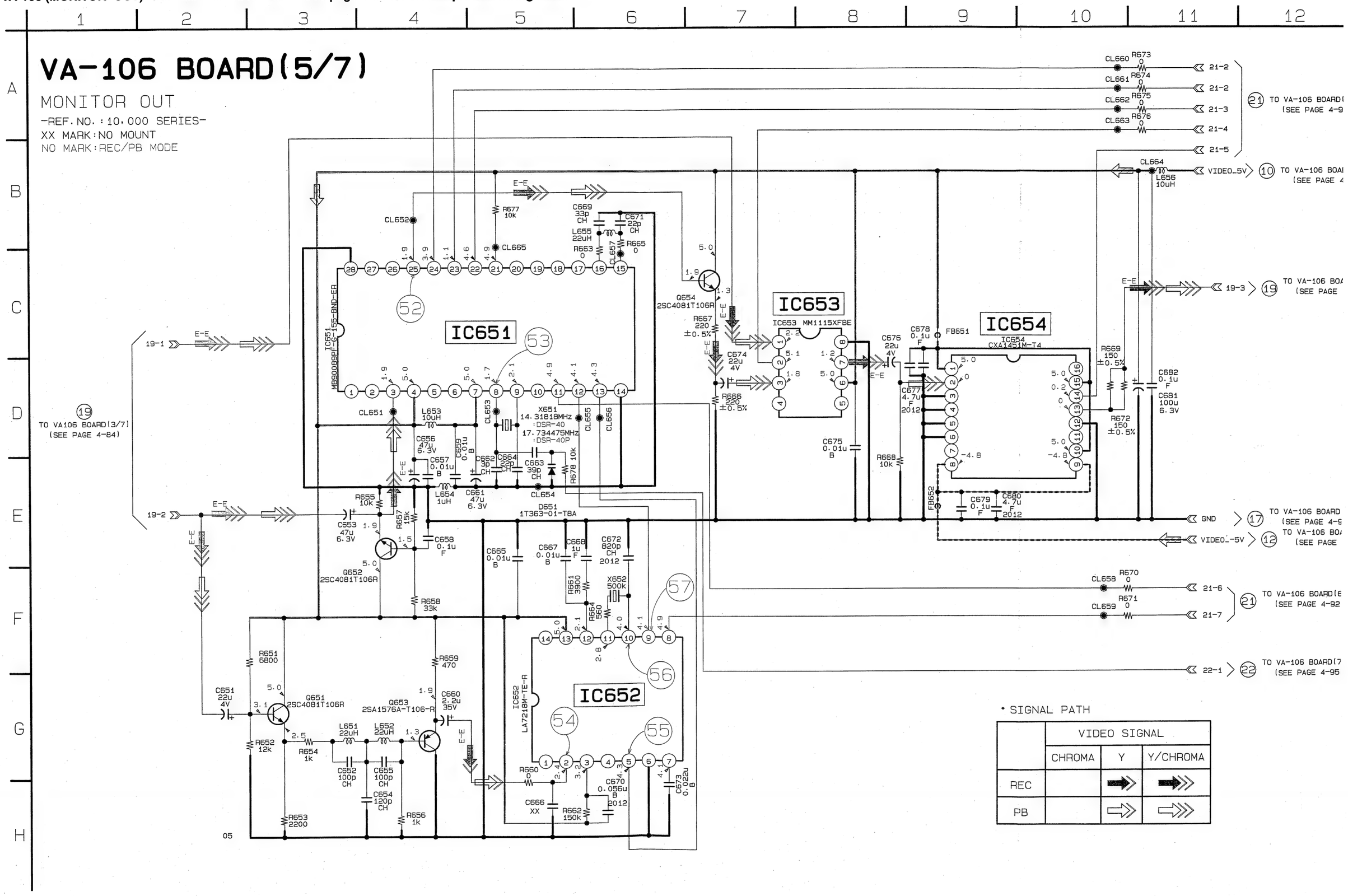
2-7 2-4 2-1 2-5 2-2 2-3 2-6

(2) TO VA-106 BOARD(1/7) (SEE PAGE 4-71)

VA-106 BOARD(5/7)

MONITOR OUT

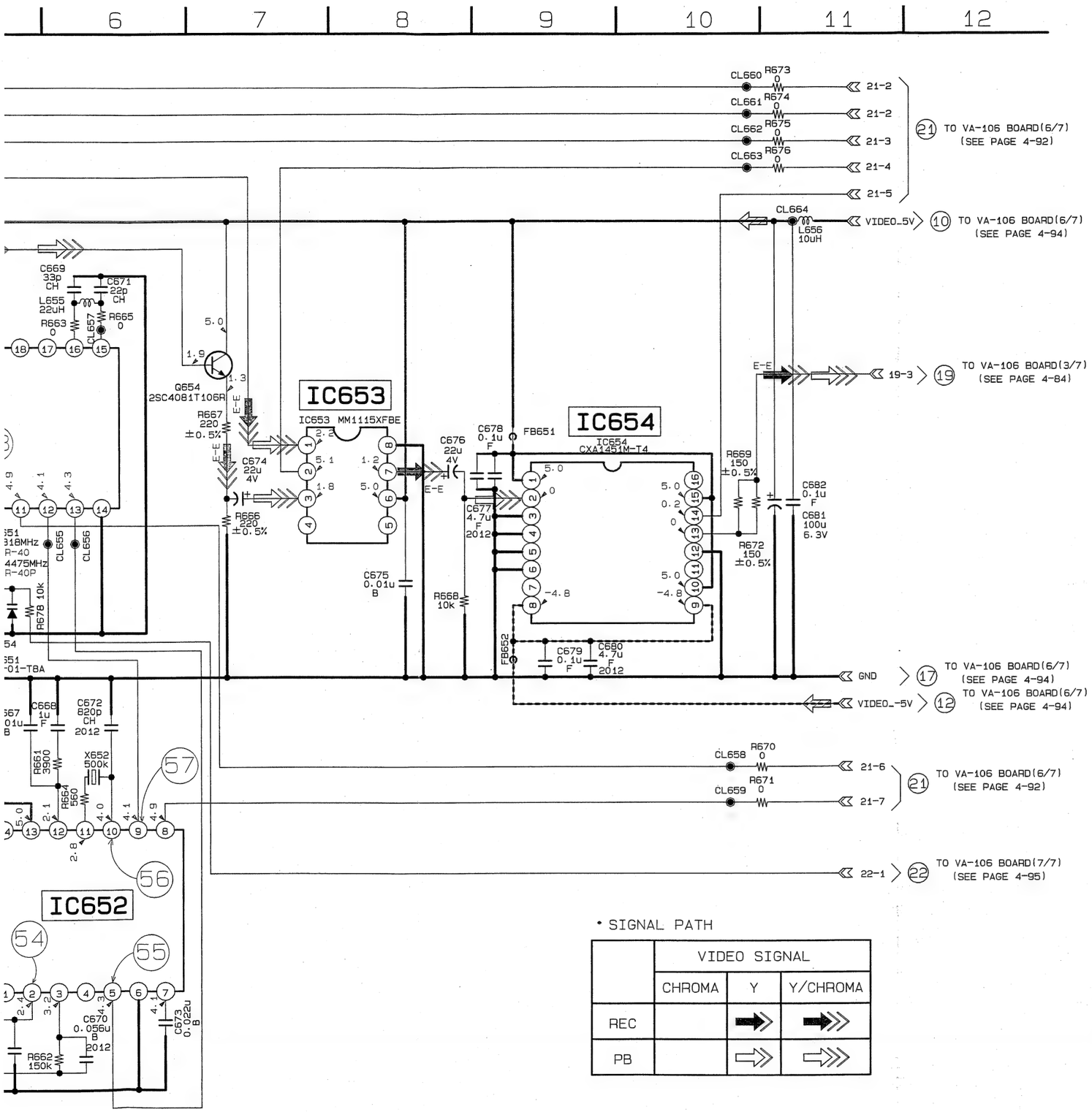
-REF. NO. : 10, 000 SERIES-
XX MARK : NO MOUNT
NO MARK : REC/PB MODE



• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC		⇒	⇛
PB		⇨	⇛

oard.



• SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC		⇒	⇒
PB		⇨	⇨

VA-106 BOARD (5/7)

52

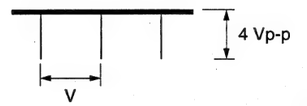

IC651 ㉕ REC/PB

53


DSR-40: 14.32 MHz
DSR-40P: 17.73 MHz
IC651 ⑧ REC/PB

54

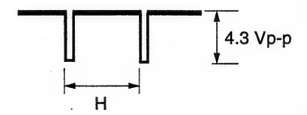

IC652 ② REC/PB

55


IC652 ⑤ REC/PB

56


500 kHz
IC652 ⑩ REC/PB

57


IC652 ⑨ REC/PB

VA-106 (HI CON) SCHEMATIC DIAGRAM • See page 4-66 for VA-106 printed wiring board.

VA-106 BOARD(6/7)

HI CON

-REF.NO.:10.000 SERIES-

XX MARK:NO MOUNT

NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE

IC853
IC853
TC7SIO4FU(TESR)

IC851
IC851
NJM2113M

IC857
IC857

IC854
IC854
S57919PJ

IC856
IC856
S-35138CF3-TB

IC858
IC858
S-35138CF3-TB

IC859
IC859

TO VA-106 BOARD(7/7) (SEE PAGE 4-95)

TO VA-106 BOARD(6/7) (SEE PAGE 4-92)

TO HP-118 BOARD CN200 (SEE PAGE 4-120)

TO VA-106 BOARD(5/7) (SEE PAGE 4-90)

TO VA-106 BOARD(3/7) (SEE PAGE 4-84)

TO VA-106 BOARD(2/7) (SEE PAGE 4-78)

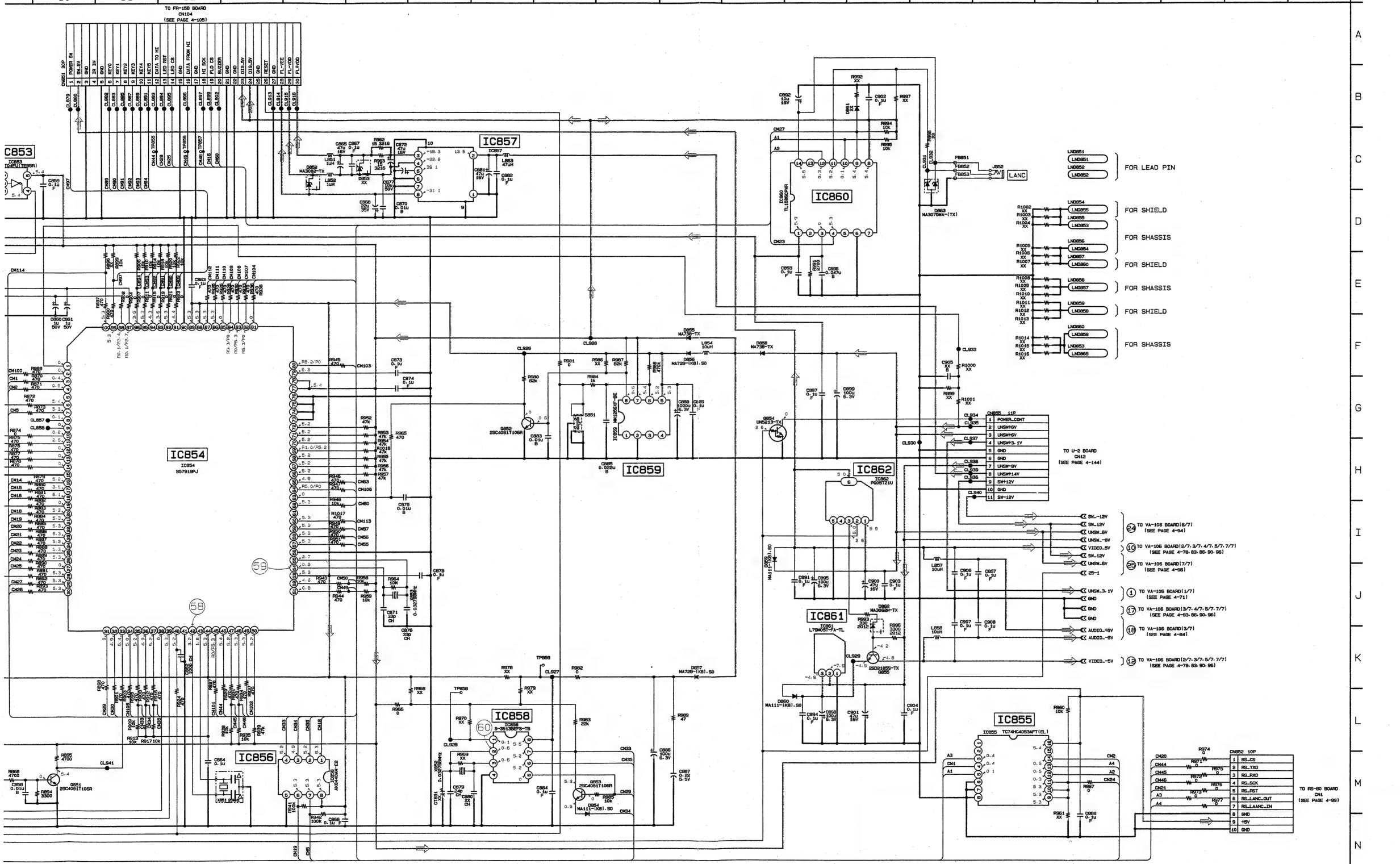
TO VA-106 BOARD(1/7) (SEE PAGE 4-71)

TO FR-158 BOARD CN104 (SEE PAGE 4-105)

CONTROL S

CN856 20P

CN851 30P


TO FR-158 BOARD
CN104
(SEE PAGE 4-105)
CN821 30P
1 POWER SW
2 SW_5V
3 GND
4 IR IN
5 GND
6 KEY0
7 KEY1
8 KEY2
9 KEY3
10 KEY4
11 KEY5
12 DATA TO HI
13 LED RST
14 LED CS
15 GND
16 DATA FROM HI
17 GND
18 HI_SCK
19 FLD_CS
20 BUZZER
21 GND
22 GND
23 D10_5V
24 D10_5V
25 GND
26 RESET
27 GND
28 FL-VEE
29 FL-VDD
30 FL+VDD
IC857
IC854
S57919PJ
IC856
IC858
S-35136B-TB
IC859
IC860
IC861
L79M05T-FA-TL
IC862
IC855
TC74HC4053AFT(EL)
LANC
FOR LEAD PIN
FOR SHIELD
FOR SHASSIS
FOR SHIELD
FOR SHASSIS
FOR SHIELD
FOR SHASSIS
TO U-2 BOARD
CN12
(SEE PAGE 4-144)
TO VA-106 BOARD(6/7)
(SEE PAGE 4-94)
TO VA-106 BOARD(2/7.3/7.4/7.5/7.7/7)
(SEE PAGE 4-78.83.86.90.96)
TO VA-106 BOARD(7/7)
(SEE PAGE 4-96)
TO VA-106 BOARD(1/7)
(SEE PAGE 4-71)
TO VA-106 BOARD(3/7.4/7.5/7.7/7)
(SEE PAGE 4-83.86.90.96)
TO VA-106 BOARD(3/7)
(SEE PAGE 4-84)
TO VA-106 BOARD(2/7.3/7.5/7.7/7)
(SEE PAGE 4-78.83.90.96)
CN852 10P
RS_CS
RS_TXD
RS_RXD
RS_SCK
RS_RST
RS_LANC_OUT
RS_LAANC_IN
GND
+5V
GND
TO RS-80 BOARD
CN1
(SEE PAGE 4-99)

VA-106 (SG SELECT, EVR) SCHEMATIC DIAGRAM • See page 4-66 for VA-106 printed wiring board.

VA-106 BOARD (6/7)

58

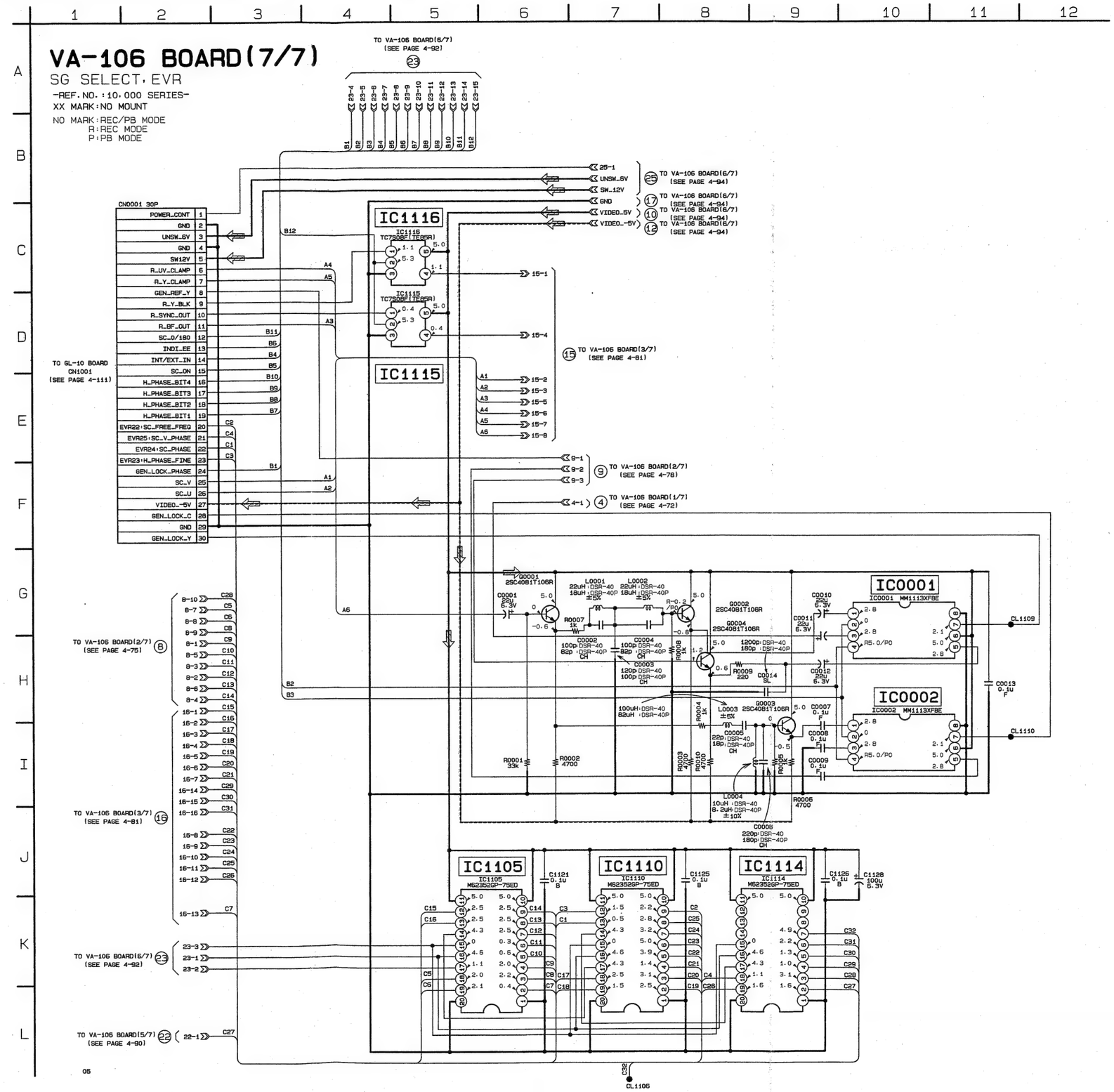

20 MHz
IC854 ㊷ REC/PB

59


32.798 kHz
IC854 ㊹ REC/PB

60


32.798 kHz
IC858 ② REC/PB

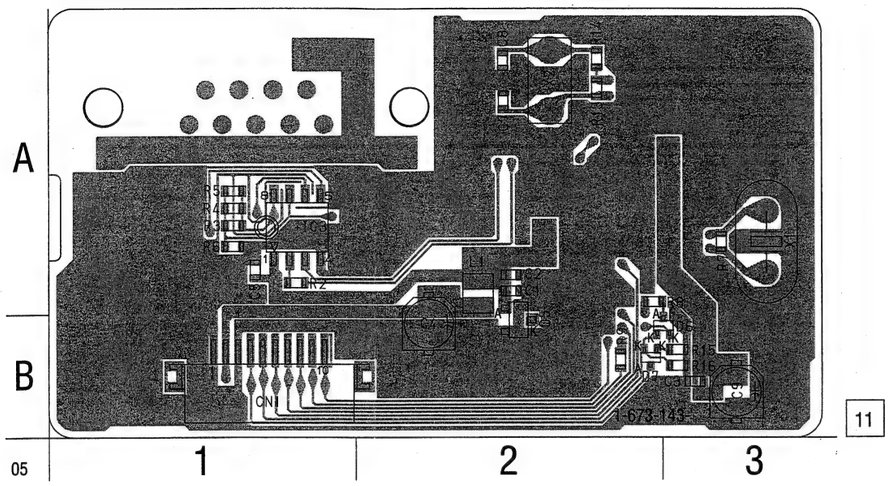


RS-80 (RS-422A IF) PRINTED WIRING BOARD

– Ref. No.: RS-80 board; 3,000 series –

- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.

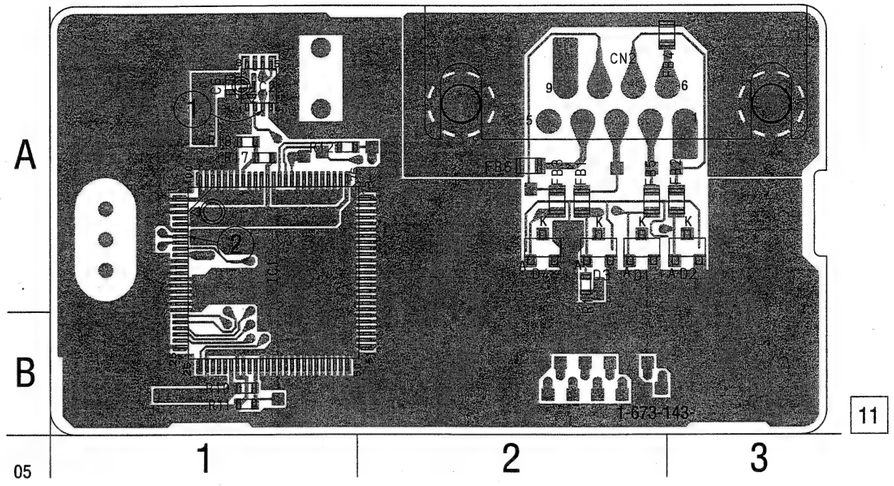
RS-80 BOARD (SIDE A)



RS-80 BOARD (SIDE A)

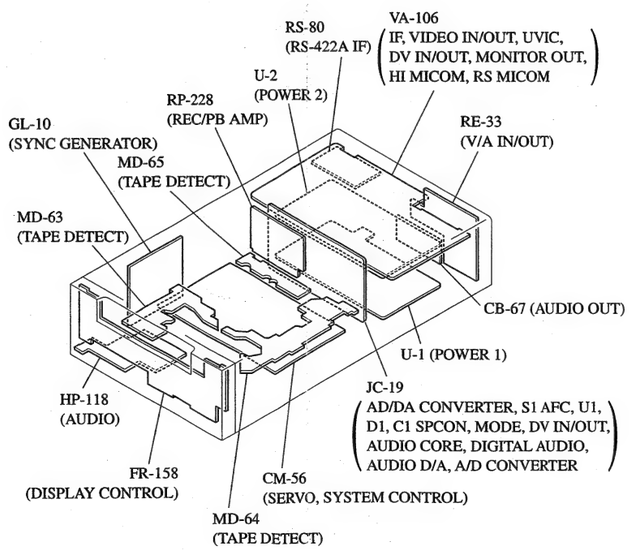
CN1	B-1
D5	B-2
D6	B-2
D7	B-2
IC3	A-1

RS-80 BOARD (SIDE B)



RS-80 BOARD (SIDE B)

CN 2	A-2
D 1	A-2
D 2	A-3
D 3	A-2
D 4	A-2
IC 1	A-1
IC 2	A-2



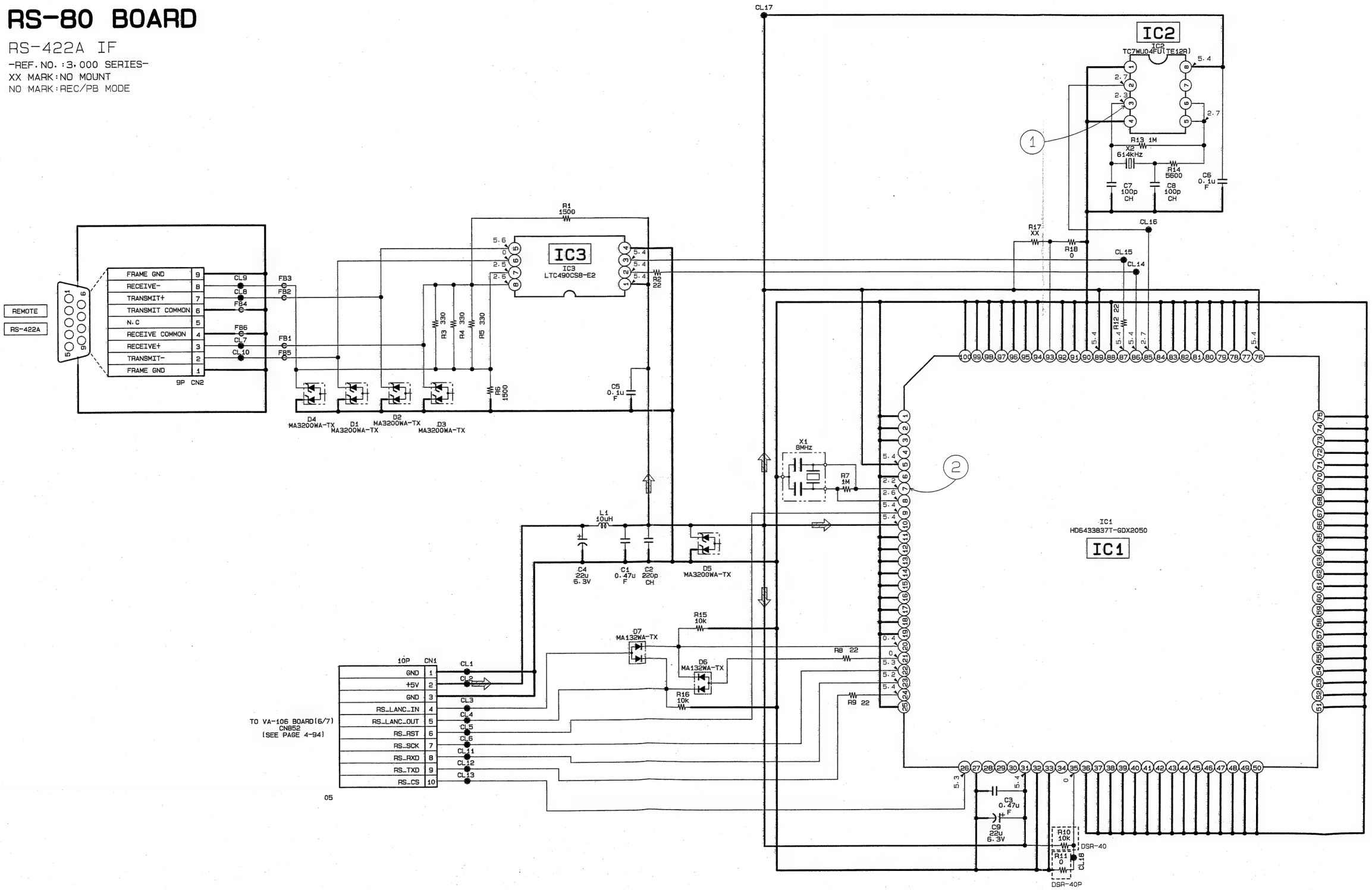
RS-80 BOARD

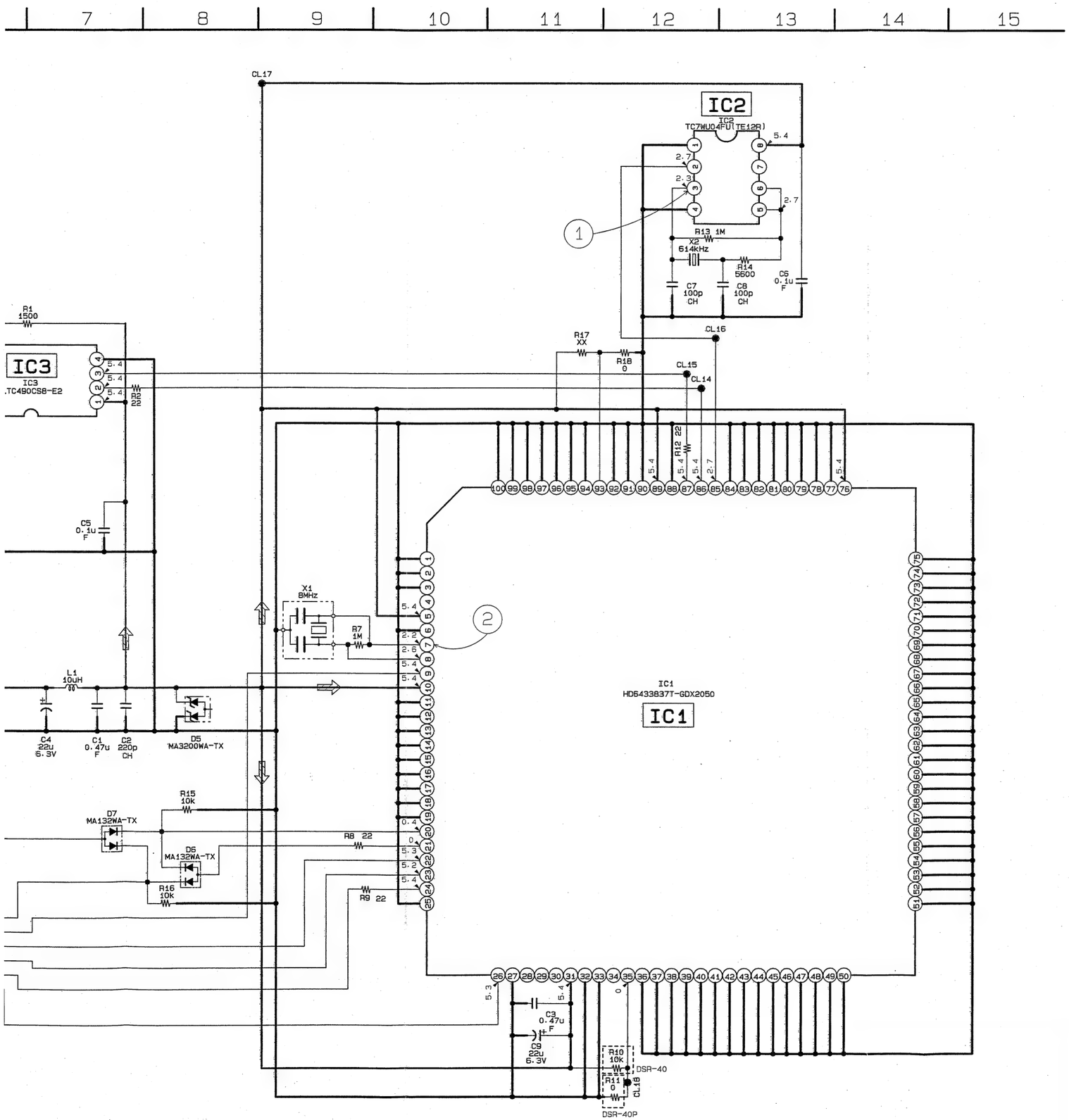
RS-422A IF

-REF. NO. :3.000 SERIES-

XX MARK:NO MOUNT

NO MARK:REC/PB MODE



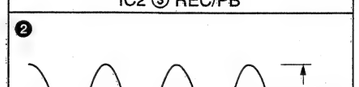


RS-80 BOARD

❶

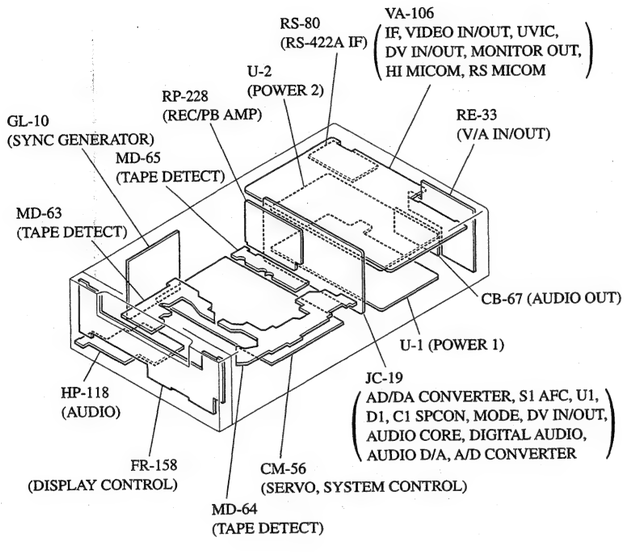
IC2 ③ REC/PB

❷



IC1 ⑦ REC/PB

- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor



FR-158 BOARD (SIDE A)

D101	A-1
D102	C-4
D108	B-7
D109	B-7
D110	B-7
D111	B-6
D112	B-6
D113	A-1
D114	A-1
D117	B-6
Q101	A-1

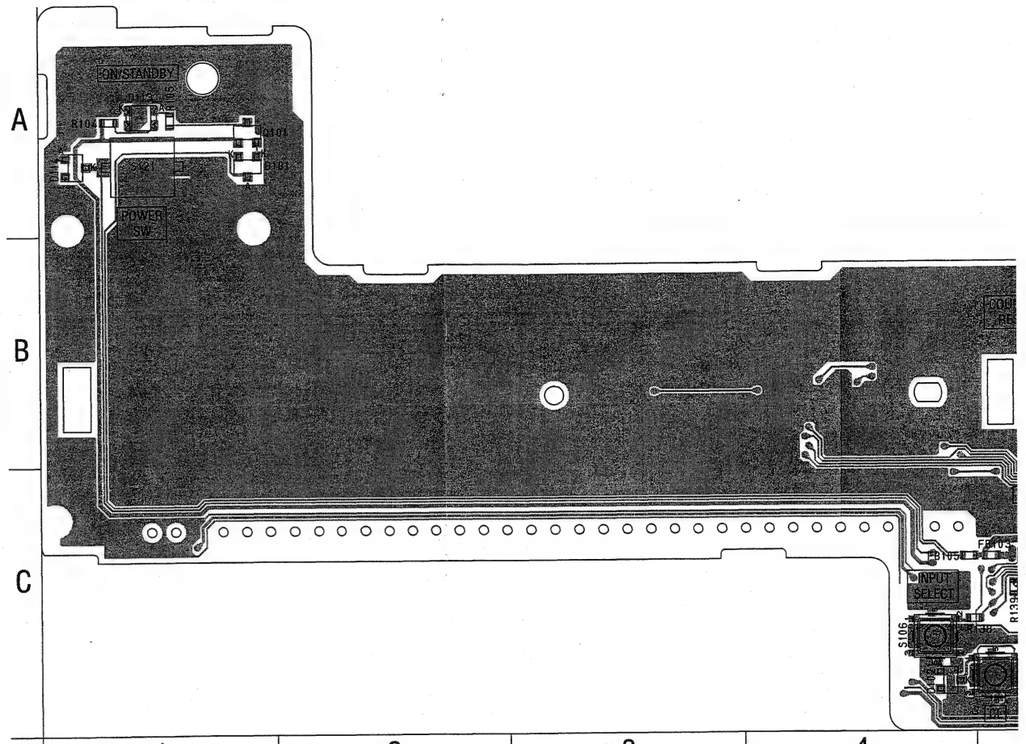
FR-158 BOARD (SIDE B)

CN104	A-5
D115	B-3
D116	A-5
IC103	B-5
IC104	B-3
Q103	B-7
Q104	B-7
Q105	B-7
Q106	B-6
Q107	B-6
Q110	B-6

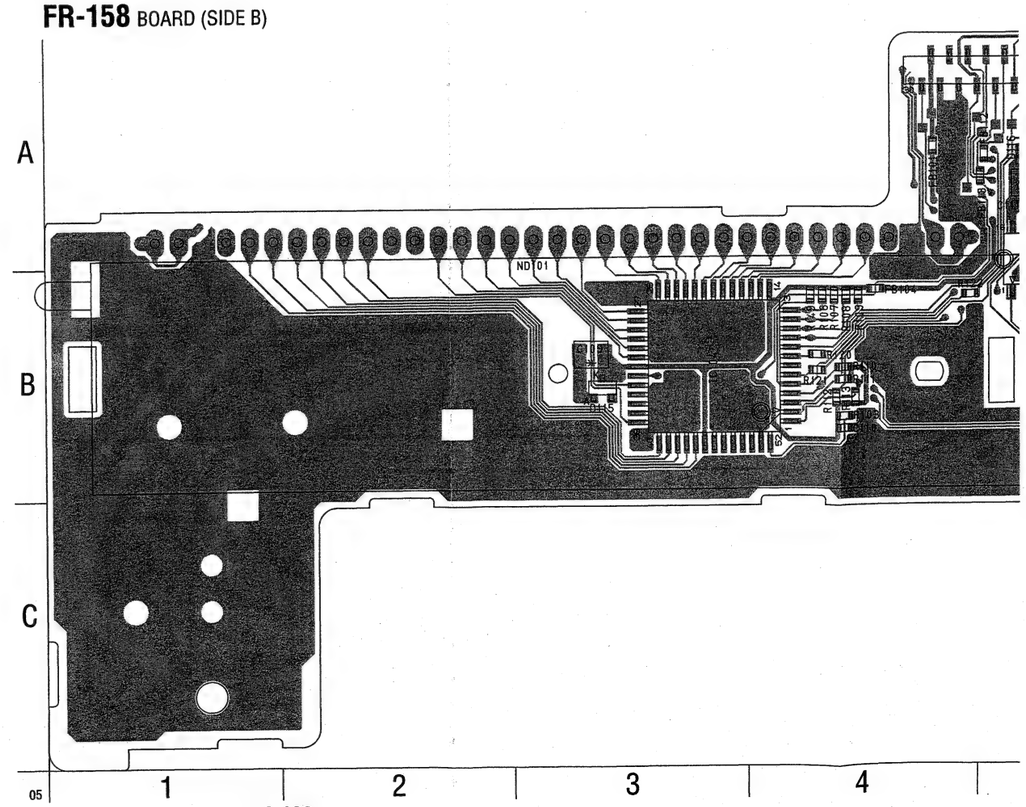
FR-158 (DISPLAY CONTROL) PRINTED WIRING BOARD

– Ref. No.: FR-158 board; 3,000 series –

FR-158 BOARD (SIDE A)



FR-158 BOARD (SIDE B)



FR-158 (DISPLAY CONTROL) PRINTED WIRING BOARD

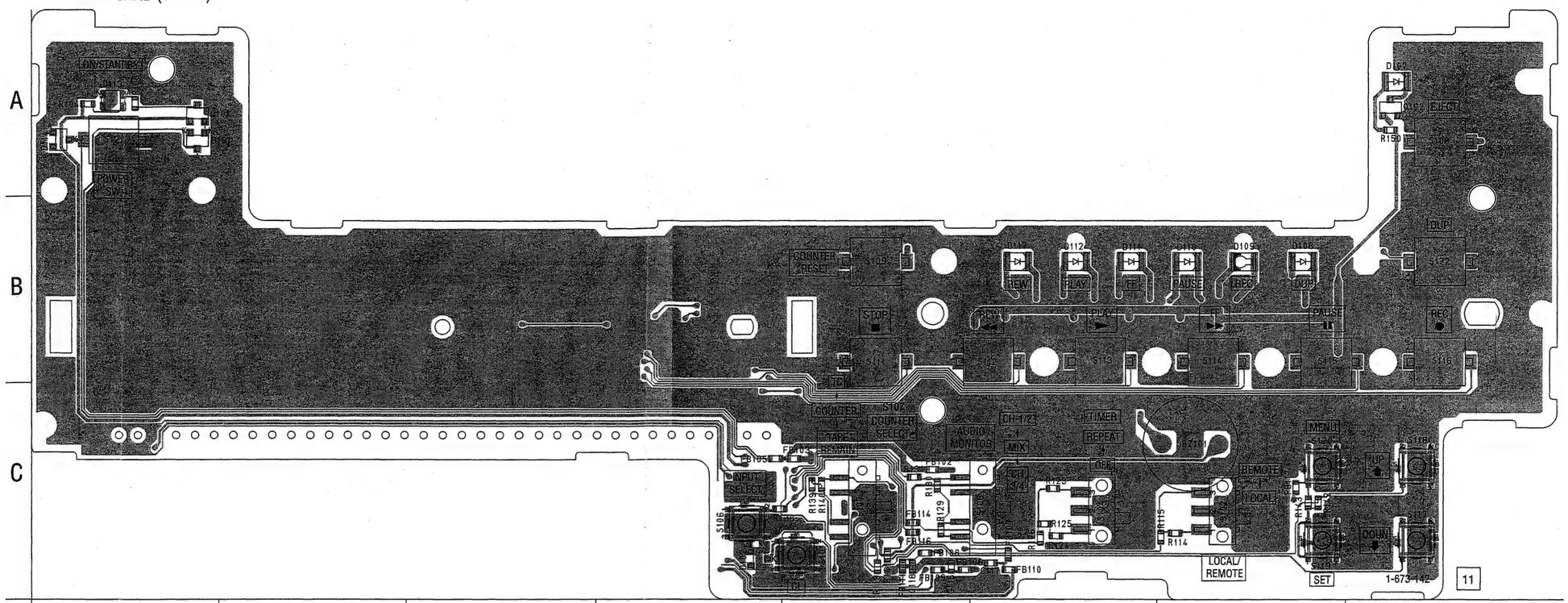
– Ref. No.: FR-158 board; 3,000 series –

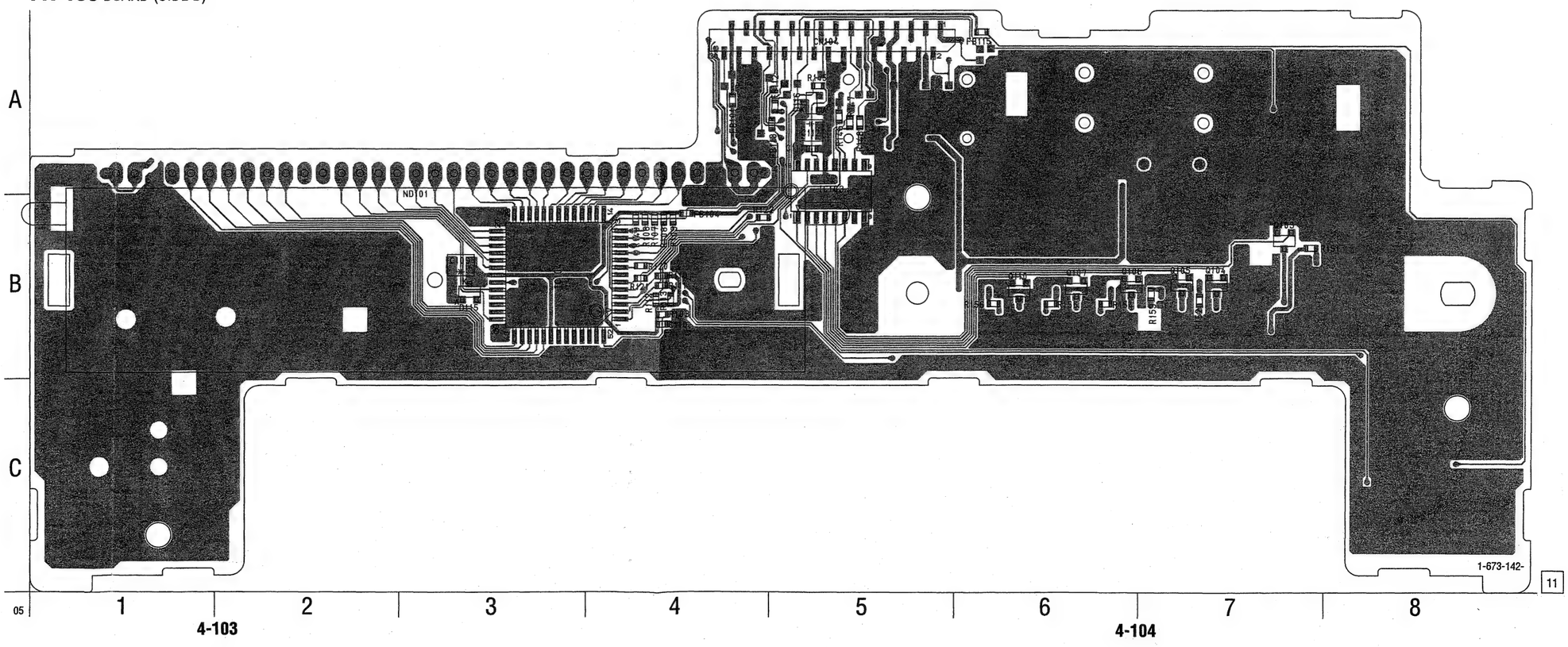
FR-158 BOARD (SIDE A)

D101	A-1
D102	C-4
D108	B-7
D109	B-7
D110	B-7
D111	B-6
D112	B-6
D113	A-1
D114	A-1
D117	B-6
Q101	A-1

FR-158 BOARD (SIDE B)

CN104	A-5
D115	B-3
D116	A-5
IC103	B-5
IC104	B-3
Q103	B-7
Q104	B-7
Q105	B-7
Q106	B-6
Q107	B-6
Q110	B-6





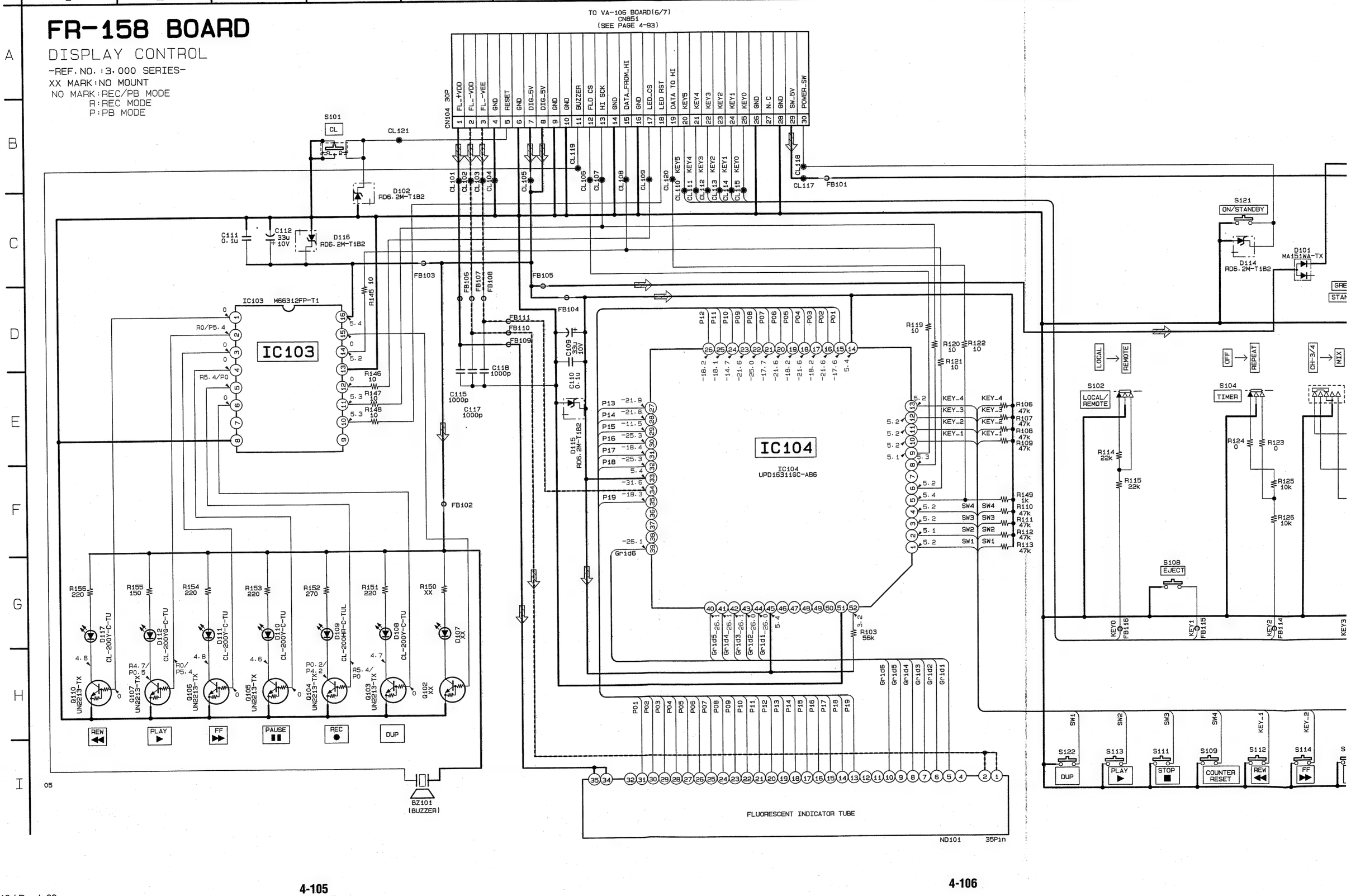
4-103 4-104

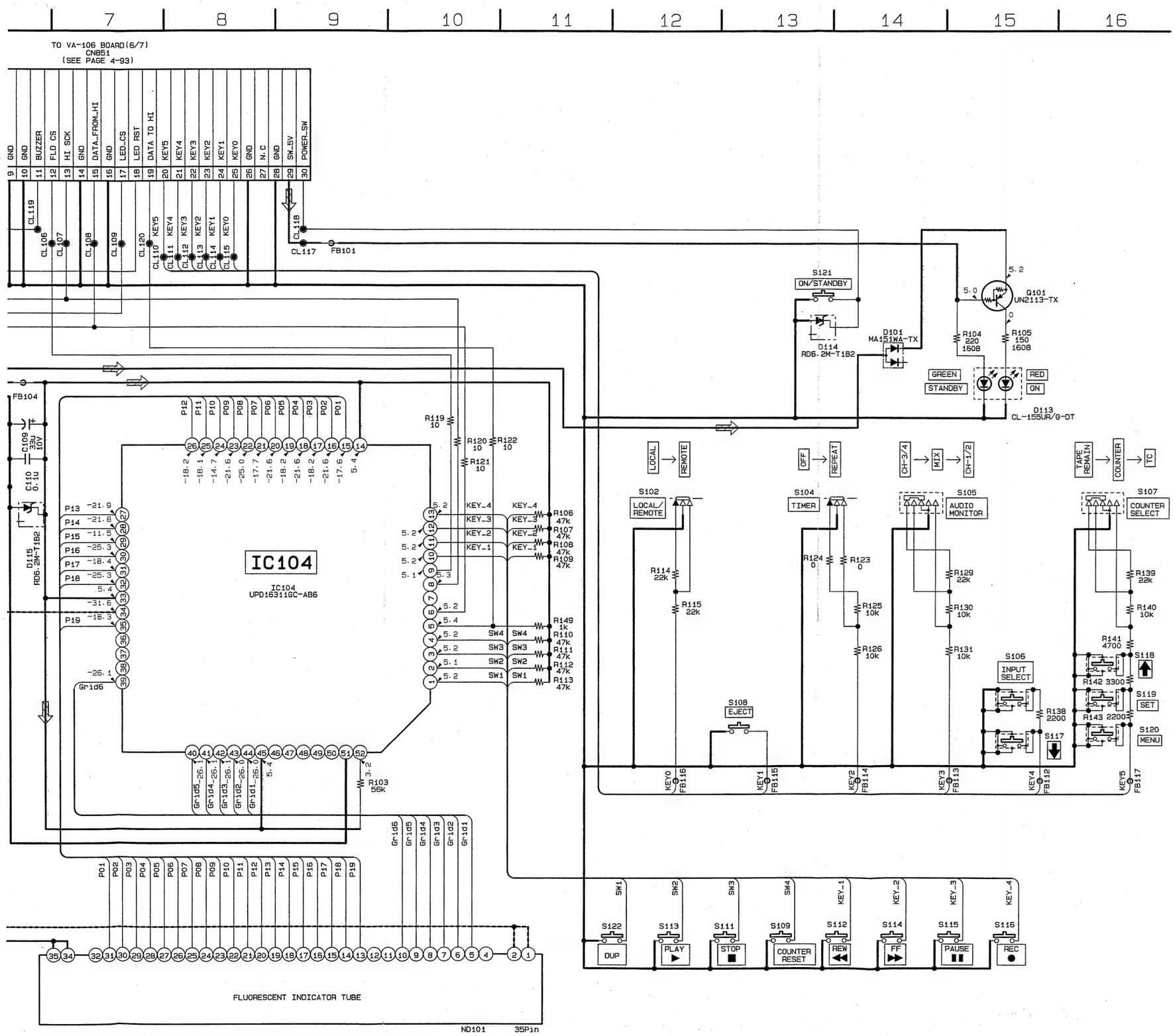
V23312 / Druck 62

FR-158 BOARD

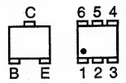
DISPLAY CONTROL

-REF. NO. : 3, 000 SERIES-
XX MARK : NO MOUNT
NO MARK : REC/PB MODE
R : REC MODE
P : PB MODE




7
8
9
10
11
12
13
14
15
16
TO VA-106 BOARD(6/7)
CN851
(SEE PAGE 4-93)
GND
GND
BUZZER
FLD CS
HI SCK
GND
DATA_FROM_HI
GND
LED_CS
LED RST
DATA TO HI
KEY5
KEY4
KEY3
KEY2
KEY1
KEY0
GND
N.C
GND
SW_5V
POWER_SW
CL119
CL106
CL107
CL108
CL109
CL120
CL110
CL111
CL112
CL113
CL114
CL115
CL118
CL117
FB101
S121
ON/STANDBY
D114
RD6.2M-T1B2
D101
MA151WA-TX
Q101
UN2113-TX
R104
220
1608
R105
150
1608
GREEN
STANDBY
RED
ON
D113
CL-155UR/G-DT
FB104
C109
33u
10V
C110
0.1u
D115
RD6.2M-T1B2
P12
P11
P10
P09
P08
P07
P06
P05
P04
P03
P02
P01
R119
10
R120
10
R122
10
R121
10
IC104
IC104
UPD16311GC-AB6
KEY_4
KEY_3
KEY_2
KEY_1
R106
47k
R107
47k
R108
47k
R109
47k
SW4
SW3
SW2
SW1
R149
1k
R110
47k
R111
47k
R112
47k
R113
47k
Grid6
R103
56k
Grid5
Grid4
Grid3
Grid2
Grid1
FLUORESCENT INDICATOR TUBE
ND101
35Pin
LOCAL
REMOTE
S102
LOCAL/
REMOTE
R114
22k
R115
22k
OFF
REPEAT
S104
TIMER
R124
0
R123
0
R125
10k
R126
10k
CH-3/4
MIX
CH-1/2
S105
AUDIO
MONITOR
R129
22k
R130
10k
R131
10k
S106
INPUT
SELECT
R138
2200
S117
TAPE
REMAIN
COUNTER
TC
S107
COUNTER
SELECT
R139
22k
R140
10k
R141
4700
R142 3300
R143 2200
S118
S119
SET
S120
MENU
S108
EJECT
KEY0
KEY1
KEY2
KEY3
KEY4
KEY5
FB116
FB115
FB114
FB113
FB112
FB117
S122
DUP
S113
PLAY
S111
STOP
S109
COUNTER
RESET
S112
REW
S114
FF
S115
PAUSE
S116
REC

- **For Printed Wiring Board.**
- GL-10 board is 4-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor



GL-10 BOARD (SIDE A)

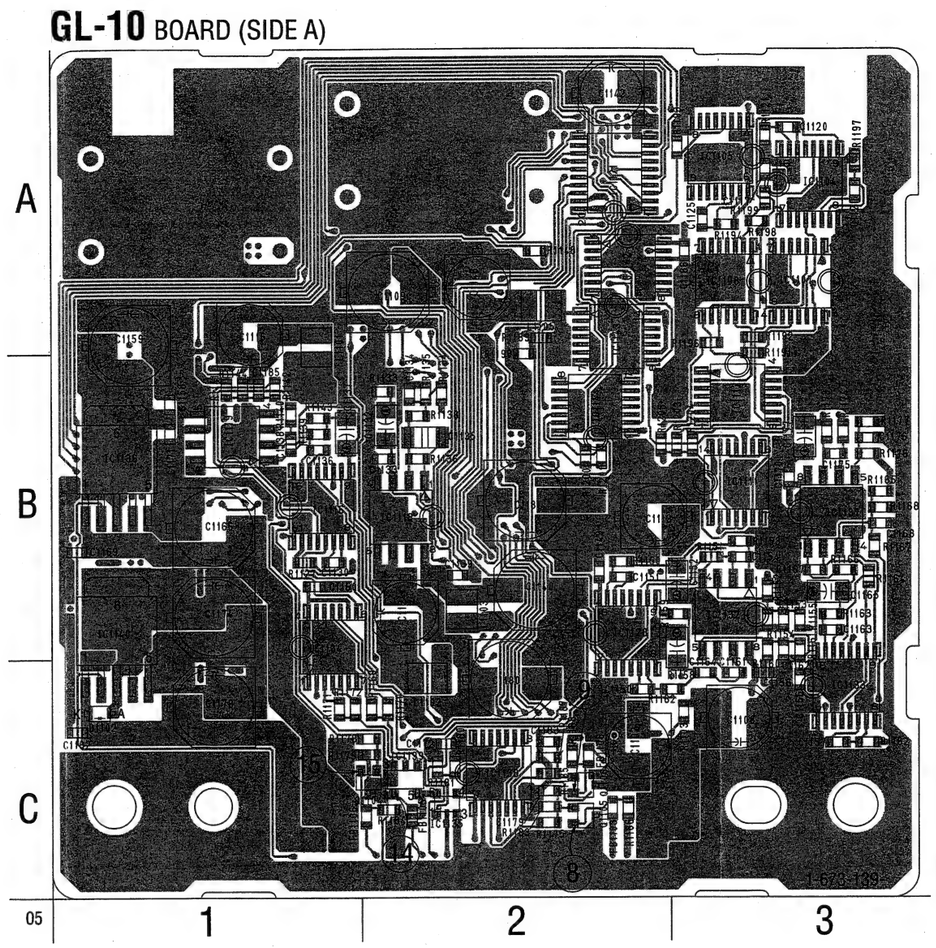
D1102 C-1

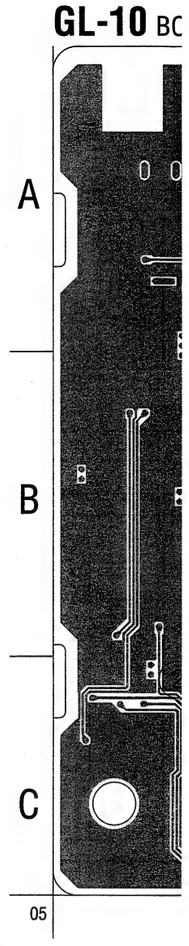
IC1104 A-3
IC1105 A-3
IC1107 A-3
IC1108 A-3
IC1111 B-3
IC1112 B-3
IC1116 B-1
IC1118 B-2
IC1119 B-1
IC1121 A-2
IC1128 B-2
IC1132 B-3
IC1133 C-3
IC1134 B-1
IC1135 C-2
IC1136 B-1
IC1137 B-3
IC1138 C-2
IC1139 C-2
IC1140 B-1
IC1142 A-2
IC1143 A-2
IC1144 B-2

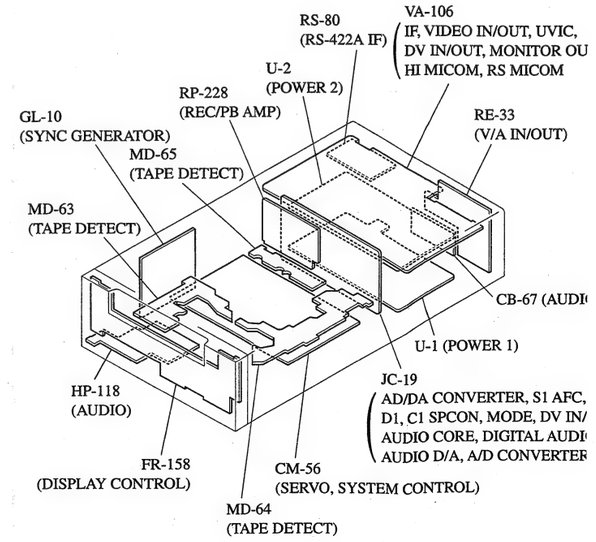
Q1104 C-2
Q1105 C-2
Q1106 C-2

GL-10 (SYNC GENERATOR) PRINTED WIRING BOARD

– Ref. No.: GL-10 board; 20,000 series –





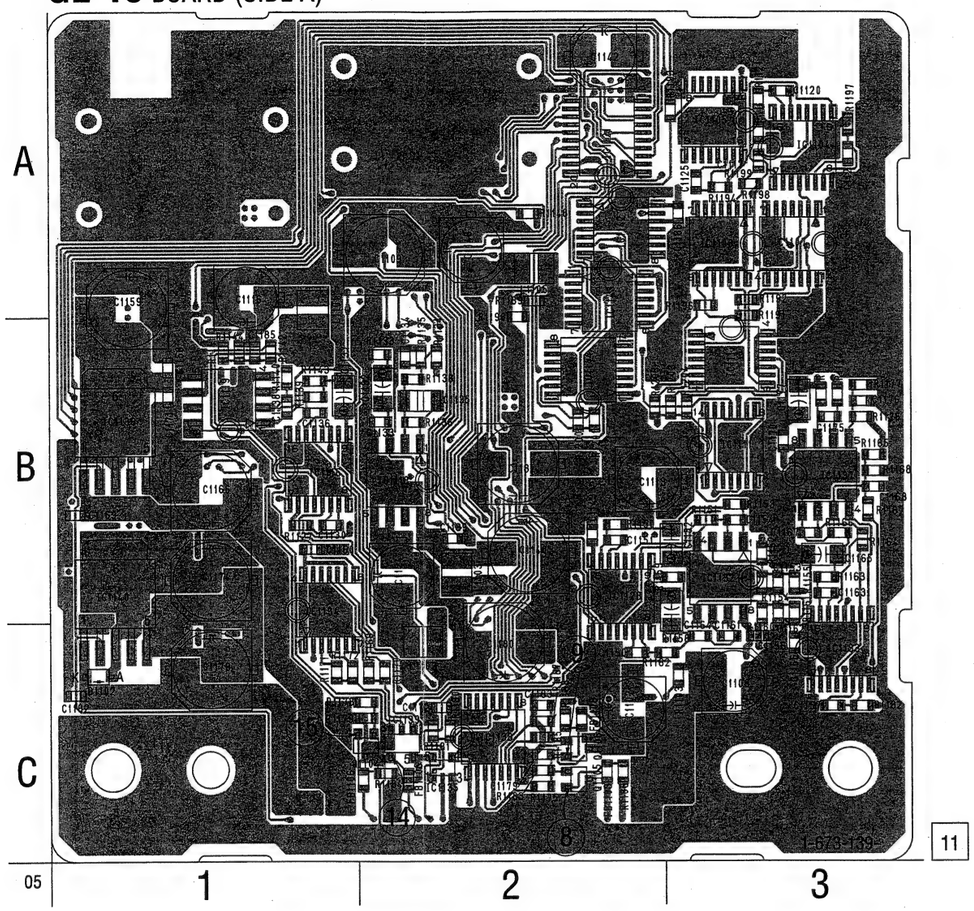


DE A)

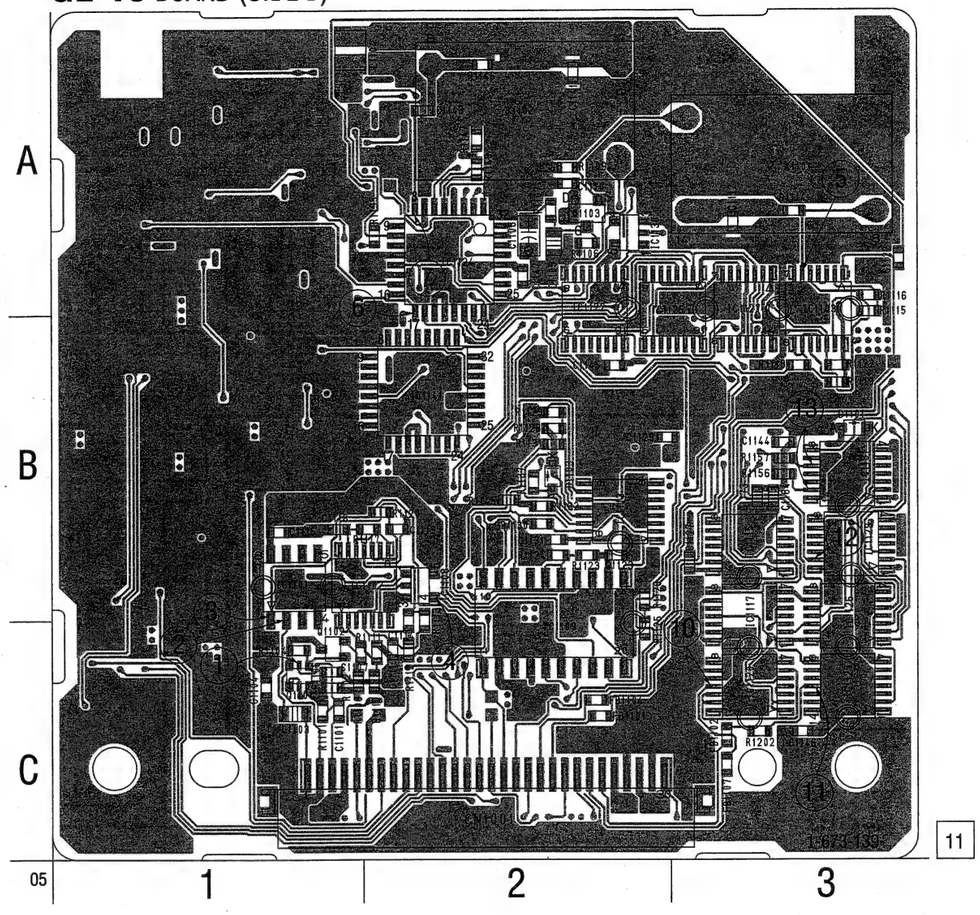
GL-10 (SYNC GENERATOR) PRINTED WIRING BOARD

– Ref. No.: GL-10 board; 20,000 series –

GL-10 BOARD (SIDE A)

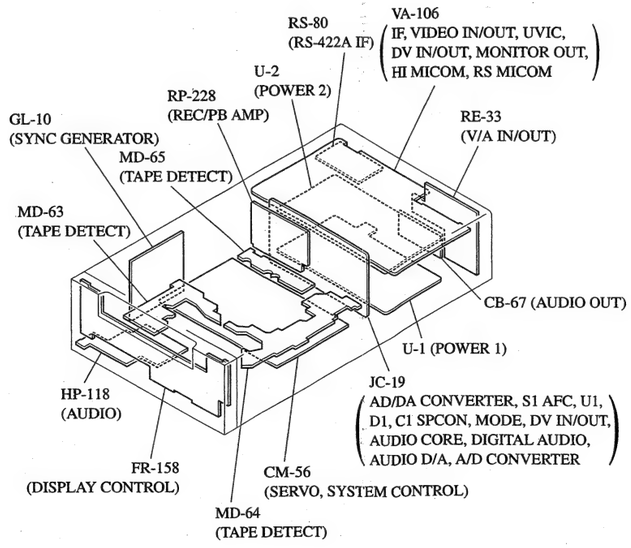


GL-10 BOARD (SIDE B)



GL-10 BOARD (SIDE B)

CN1001	C-2
D1101	B-3
D1103	B-2
IC1101	B-1
IC1102	B-2
IC1103	A-3
IC1106	B-2
IC1109	B-2
IC1113	B-2
IC1115	B-3
IC1117	B-3
IC1120	C-3
IC1122	A-2
IC1123	C-3
IC1124	A-2
IC1125	A-2
IC1126	B-3
IC1127	A-3
IC1129	B-3
IC1130	A-2
IC1131	B-3
IC1141	B-2
Q1101	C-1
Q1102	C-1
Q1103	A-2



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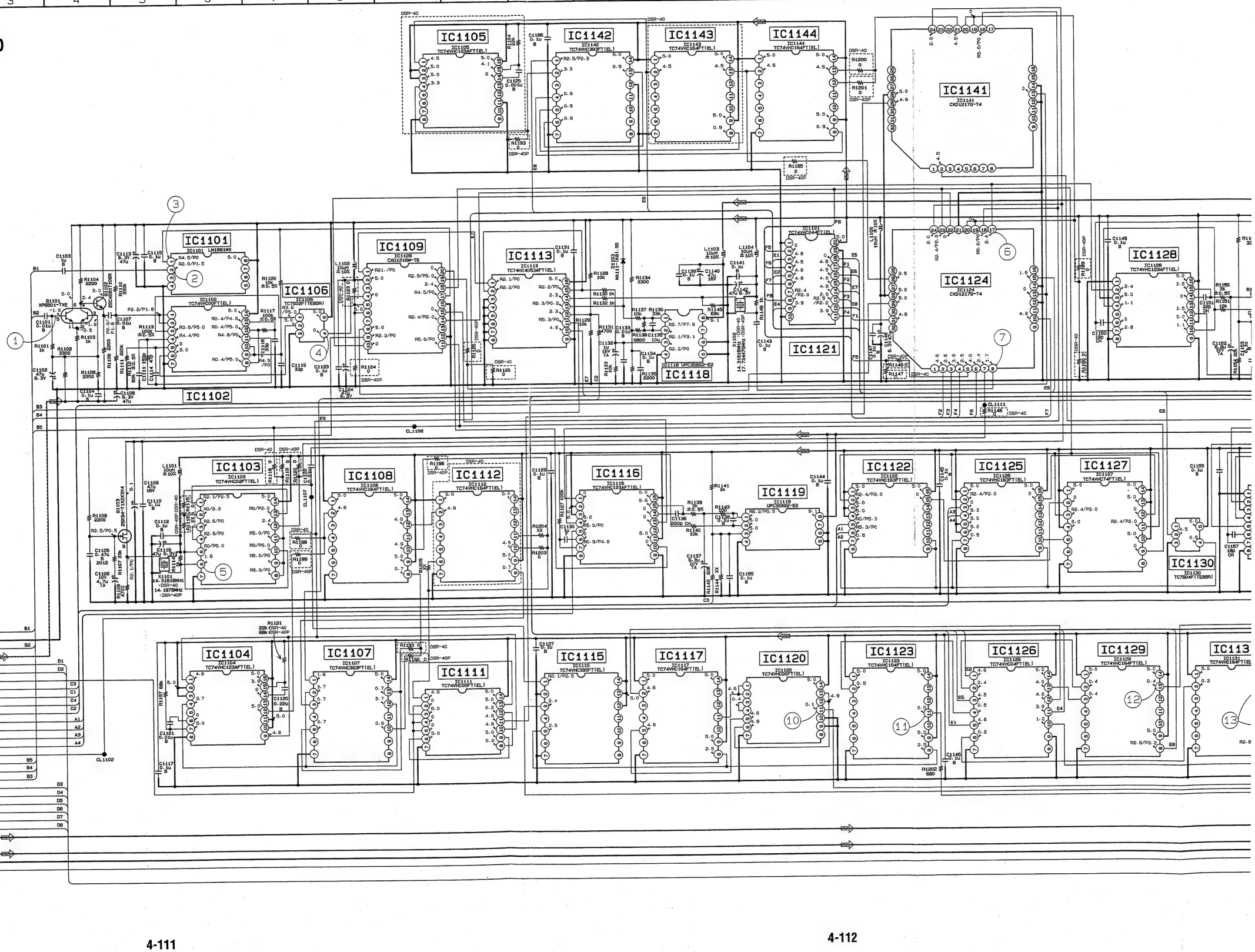
GL-10 BOARD

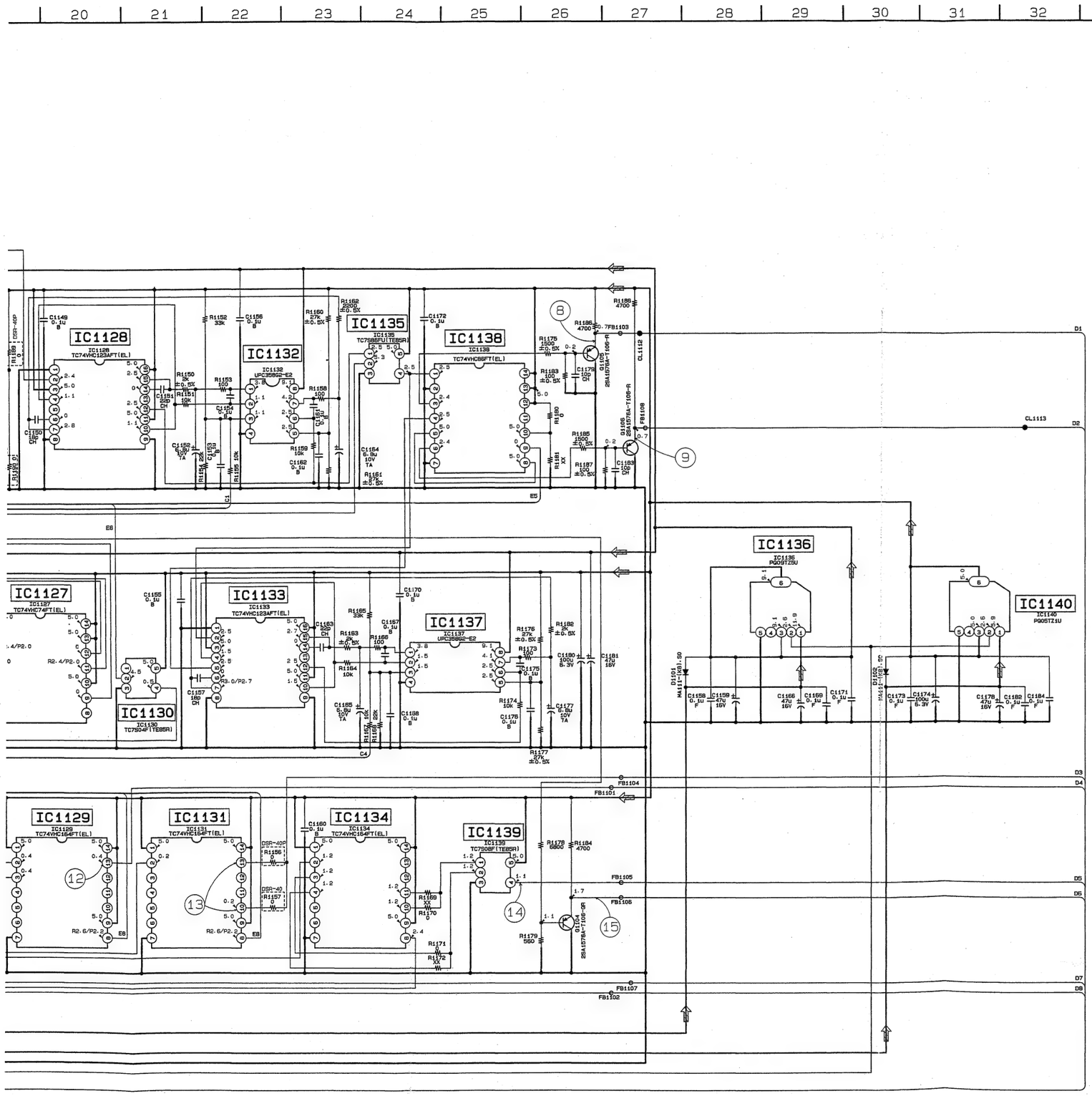
SYNC GENERATOR

-REF. NO. :20.000 SERIES-

XX MARK : NO MOUNT

NO MARK : REC/PB MODE
A : REC MODE
P : PB MODE





GL-10 BOARD

1 — 600 mVp-p, H
Q1101 ⑤ REC

2 — 1 Vp-p, H
IC1101 ② REC

3 — 5 Vp-p, H
IC1101 ① REC

4 — 6 Vp-p, H
IC1106 ④ REC

5 — 5.5 Vp-p
DSR-40: 14.32 MHz
DSR-40P: 14.19 MHz
IC1103 ⑥ REC/PB

6 — 6.5 Vp-p
DSR-40: 3.58 MHz
DSR-40P: 4.43 MHz
IC1124 ⑰ REC/PB

7 — 5.5 Vp-p
DSR-40: 14.32 MHz
DSR-40P: 17.73 MHz
IC1124 ⑧ REC/PB

8 — 450 mVp-p
DSR-40: 3.58 MHz
DSR-40P: 4.43 MHz
Q1105 E REC/PB

9 — 450 mVp-p
DSR-40: 3.58 MHz
DSR-40P: 4.43 MHz
Q1106 E REC/PB

10 — 5 Vp-p, H
IC1120 ⑪ REC/PB

11 — 5.3 Vp-p, H
IC1123 ⑪ REC/PB

12 — 5.3 Vp-p, H
IC1129 ⑬ REC/PB

13 — 5.3 Vp-p, H
DSR-40: IC1131 ⑩ REC/PB
DSR-40P: IC1131 ⑬ REC/PB

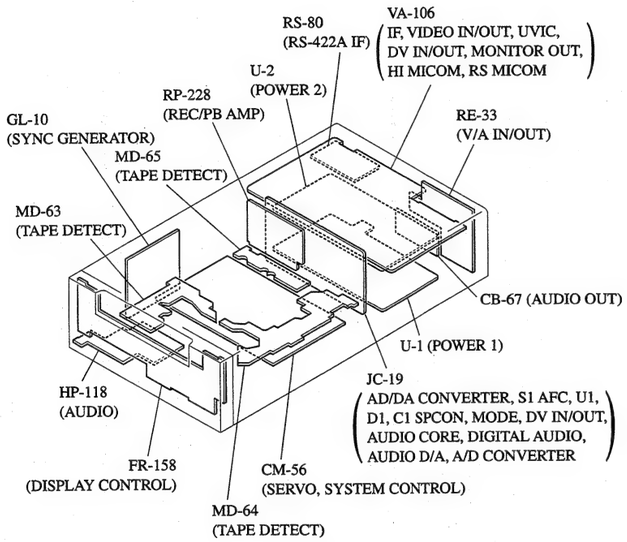
14 — 5.5 Vp-p, H
IC1139 ④ REC/PB

15 — 1.6 Vp-p, H
IC1104 E REC/PB

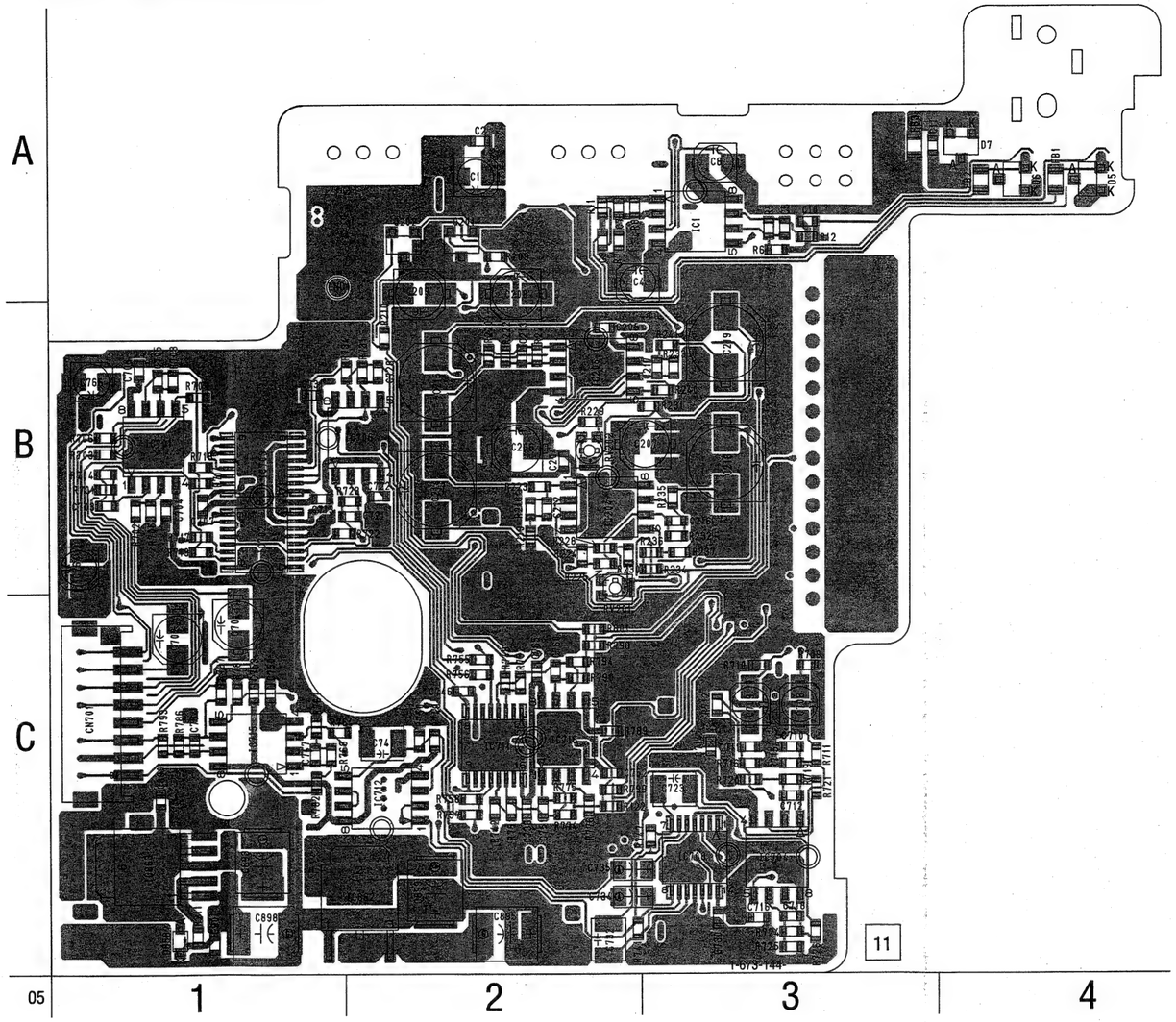
HP-118 (AUDIO) PRINTED WIRING BOARD

– Ref. No.: HP-118 board; 4,000 series –

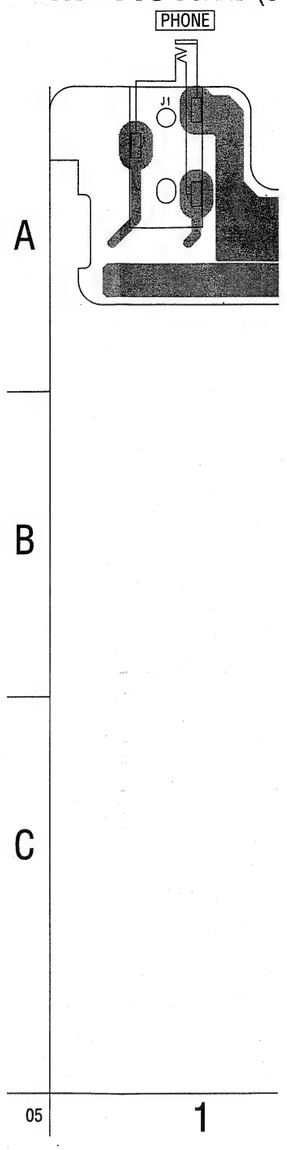
- **For Printed Wiring Board.**
- HP-118 board is 4-layer print board. However, the patterns of layers 2 and 3 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor



HP-118 BOARD (SIDE A)



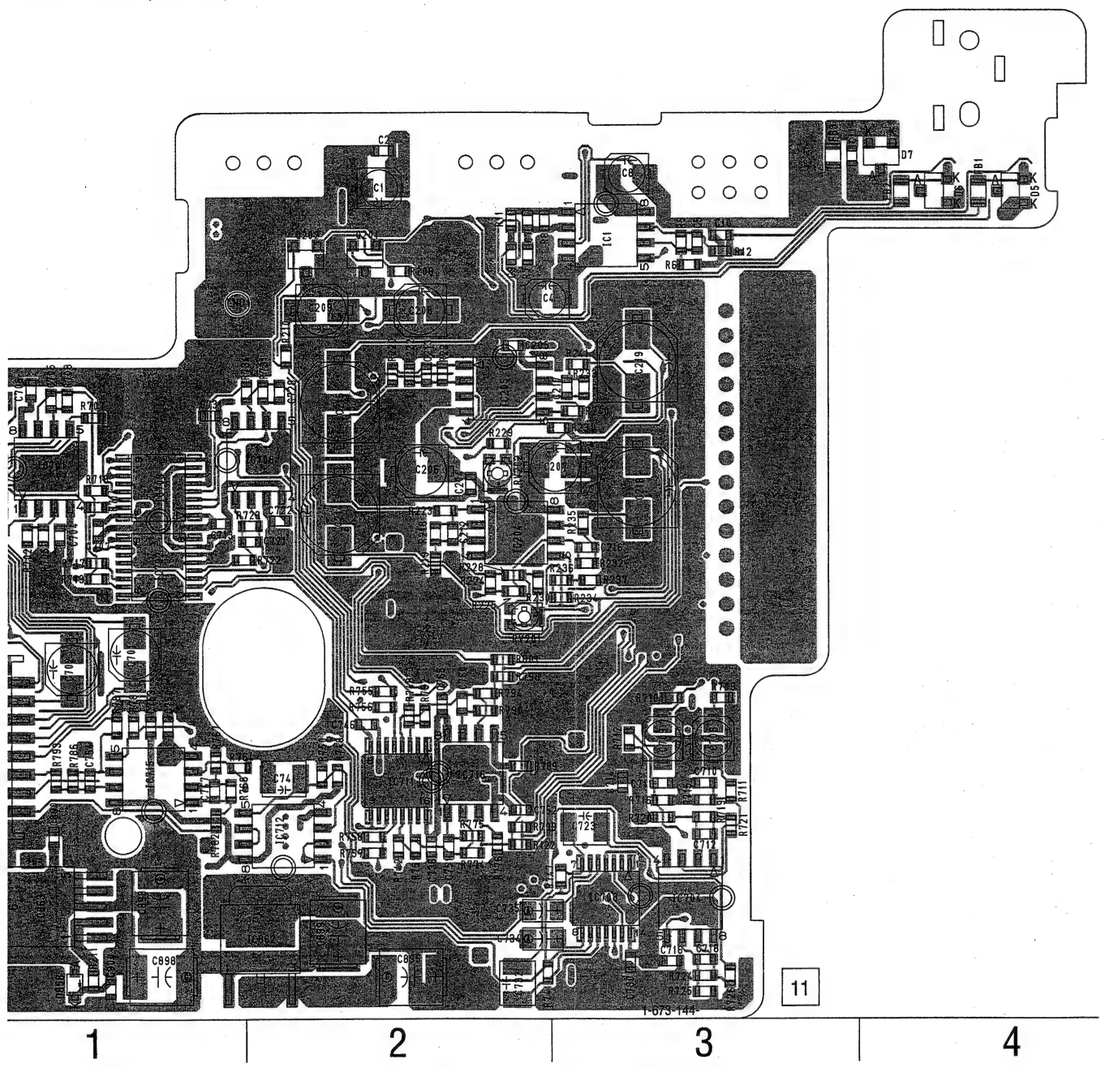
HP-118 BOARD (S



HP-118 BOARD (SIDE A)

CN701	C-1
D5	A-4
D6	A-4
D7	A-4
D858	C-1
IC1	A-3
IC204	B-2
IC205	B-2
IC701	B-1
IC702	B-1
IC703	B-1
IC704	C-3
IC706	B-2
IC708	C-3
IC711	C-2
IC712	C-2
IC715	C-1
IC716	C-2
IC862	C-2
IC863	C-1
Q201	A-2
Q202	A-2

18 BOARD (SIDE A)



ARD (SIDE A)

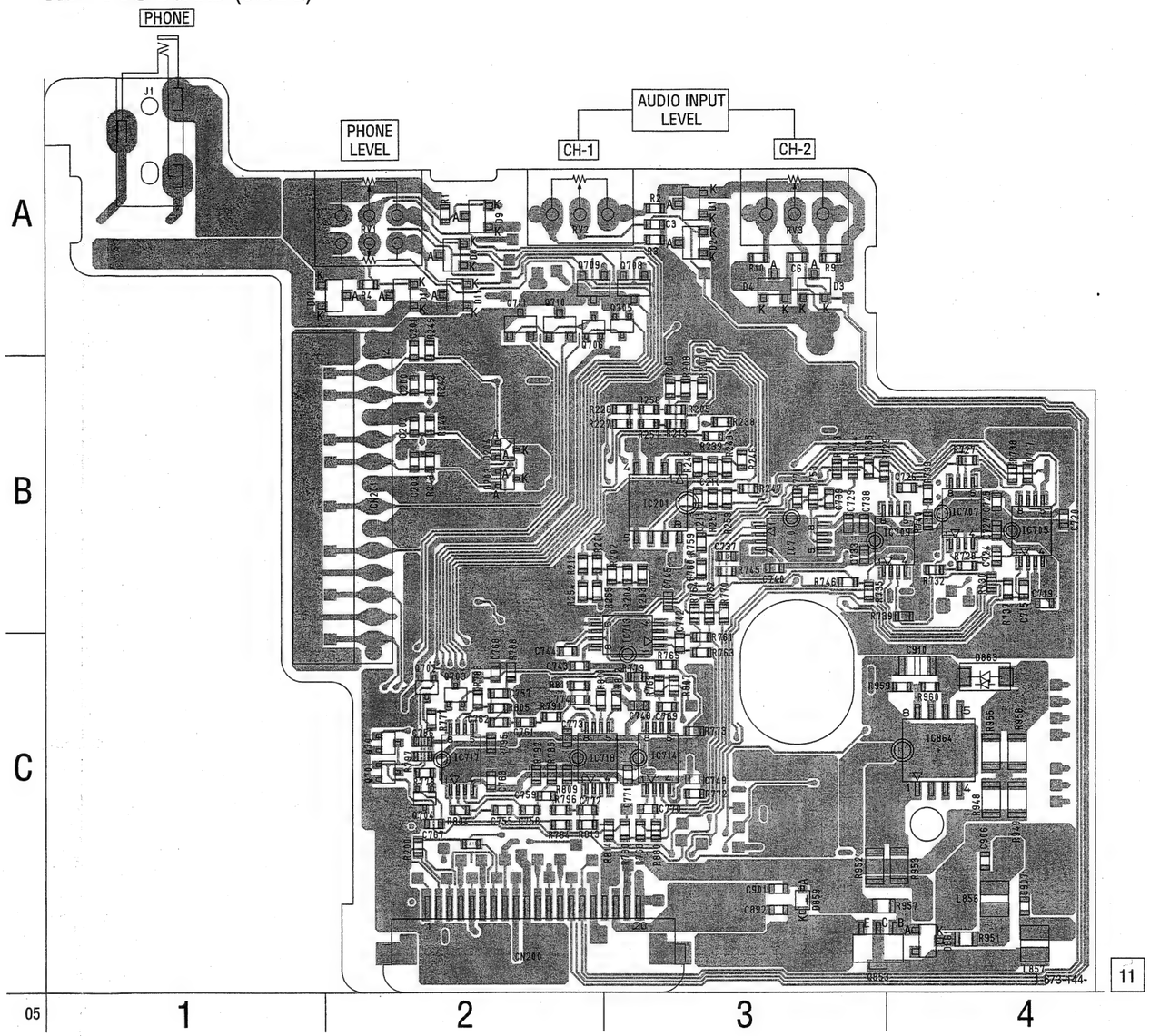
-1

-4
-4
-4
-1

-3
-2
-2
-1
-1
-1
-3
-2
-3
-2
-2
-1
-2
-2
-2
-1

-2
-2

HP-118 BOARD (SIDE B)



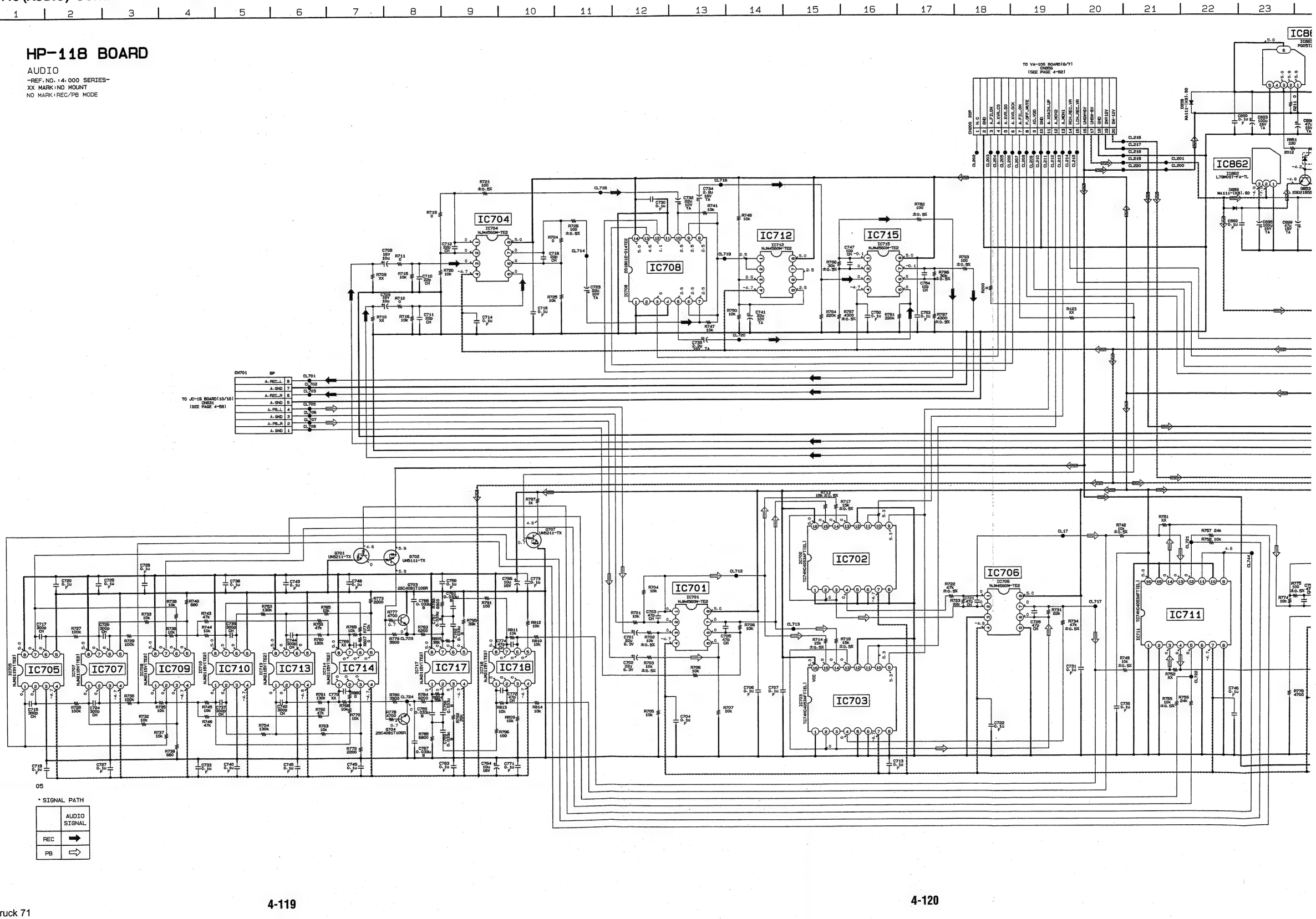
HP-118 BOARD (SIDE B)

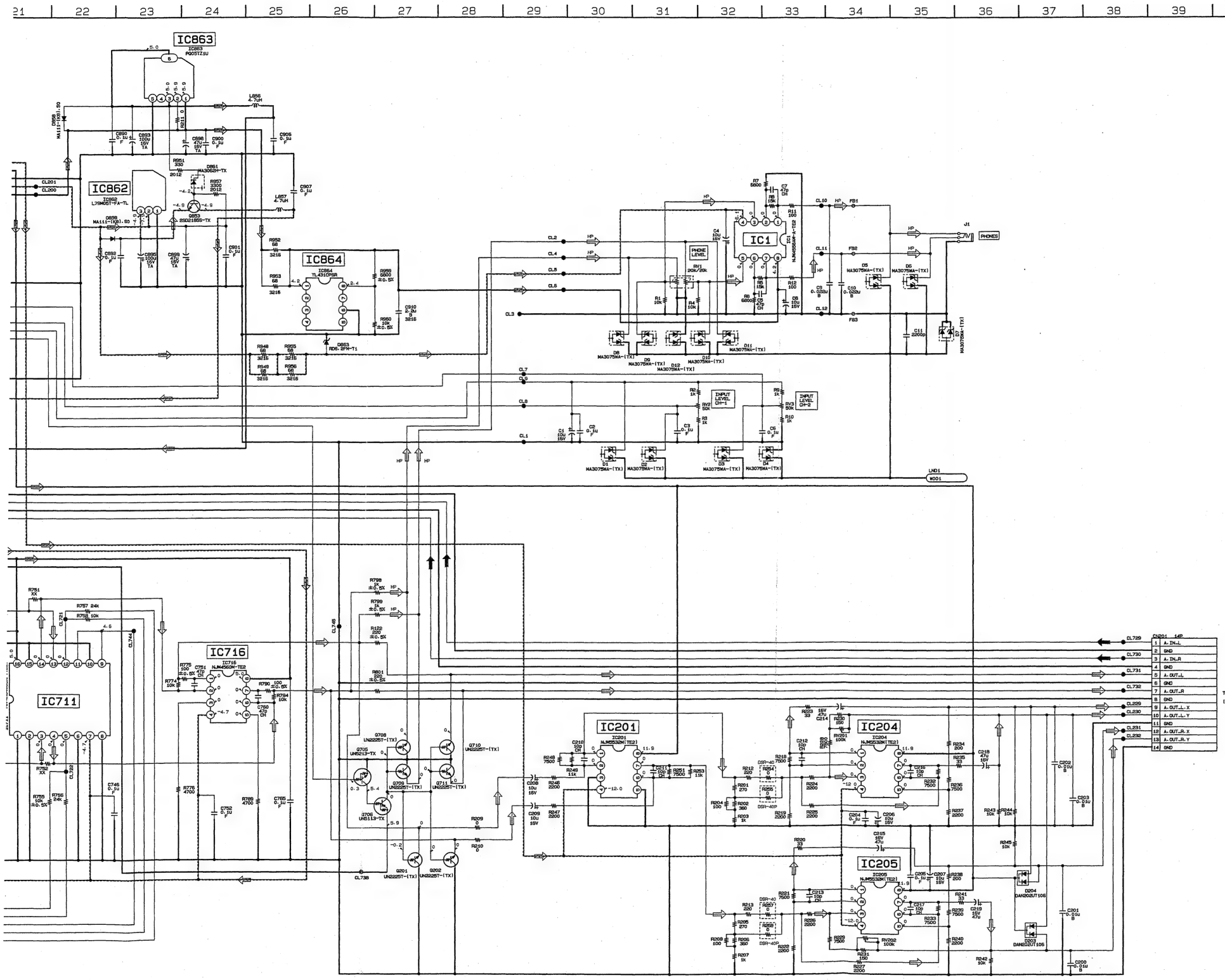
CN200	C-2	IC709	B-4
CN201	B-2	IC710	B-3
		IC713	C-3
D1	A-3	IC714	C-3
D2	A-3	IC717	C-2
D3	A-3	IC718	C-2
D4	A-3	IC864	C-4
D8	A-2		
D9	A-2	Q701	C-2
D10	A-2	Q702	C-2
D11	A-2	Q703	C-2
D12	A-2	Q704	C-2
D203	B-2	Q705	A-3
D204	B-2	Q706	A-2
D859	C-3	Q707	C-2
D861	C-4	Q708	A-3
D863	C-4	Q709	A-2
		Q710	A-2
IC201	B-3	Q711	A-2
IC705	B-4	Q853	C-3
IC707	B-4		

HP-118 BOARD

AUDIO

-REF.NO.:4.000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE

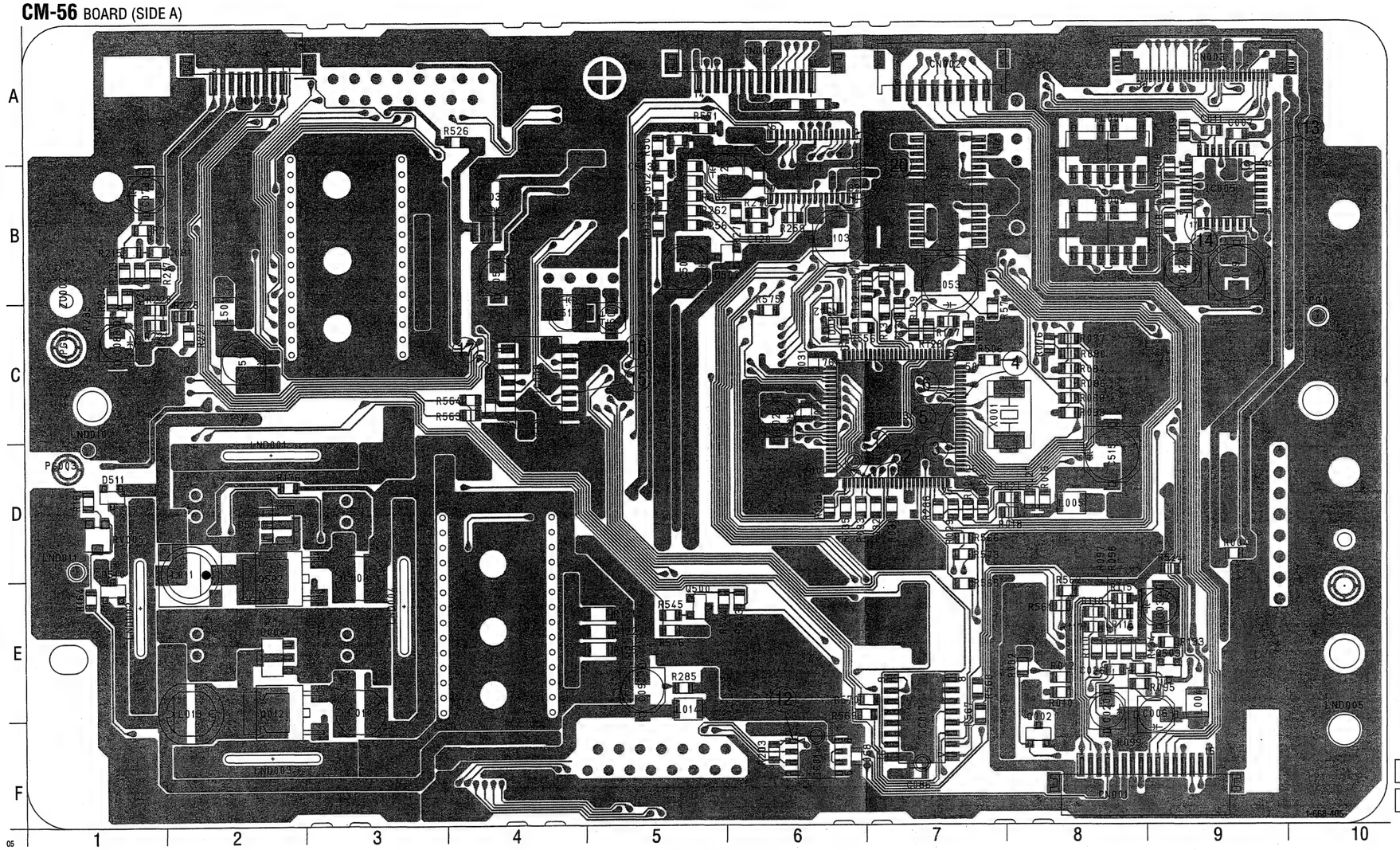



IC863
IC862
IC864
IC1
IC716
IC711
IC201
IC204
IC205
PHONES
TO RE-33 BOARD CN2 (SEE PAGE 4-65)
CN201 14P
1 A. IN-L
2 GND
3 A. IN-R
4 GND
5 A. OUT-L
6 GND
7 A. OUT-R
8 GND
9 A. OUT-L. X
10 A. OUT-L. Y
11 GND
12 A. OUT-R. X
13 A. OUT-R. Y
14 GND

CM-56 (SERVO, SYSTEM CONTROL) PRINTED WIRING BOARD

– Ref. No.: CM-56 board; 2,000 series –

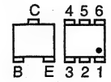
CM-56 BOARD (SIDE A)

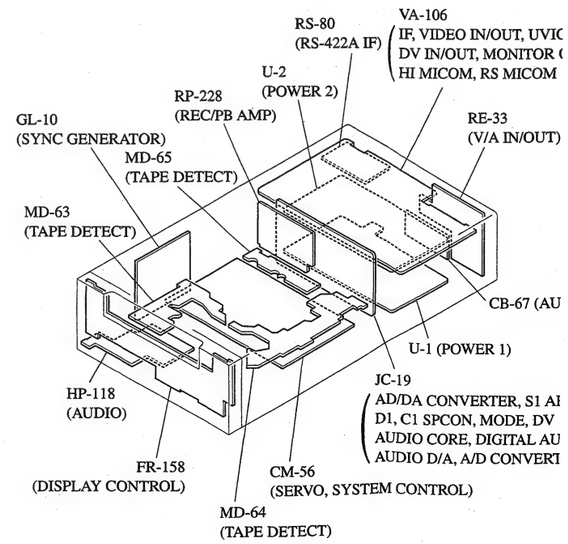


CM-56 BOARD (SIDE A)

CN001	F-8
CN002	A-7
CN003	A-9
CN005	A-2
CN008	A-6
D004	E-2
D011	C-6
D501	D-2
D502	B-5
IC003	C-7
IC005	B-9
IC008	C-4
IC009	B-7
IC014	F-6
IC017	F-7
IC021	A-6
Q002	F-8
Q012	E-2
Q500	E-5
Q502	D-2
Q503	E-9

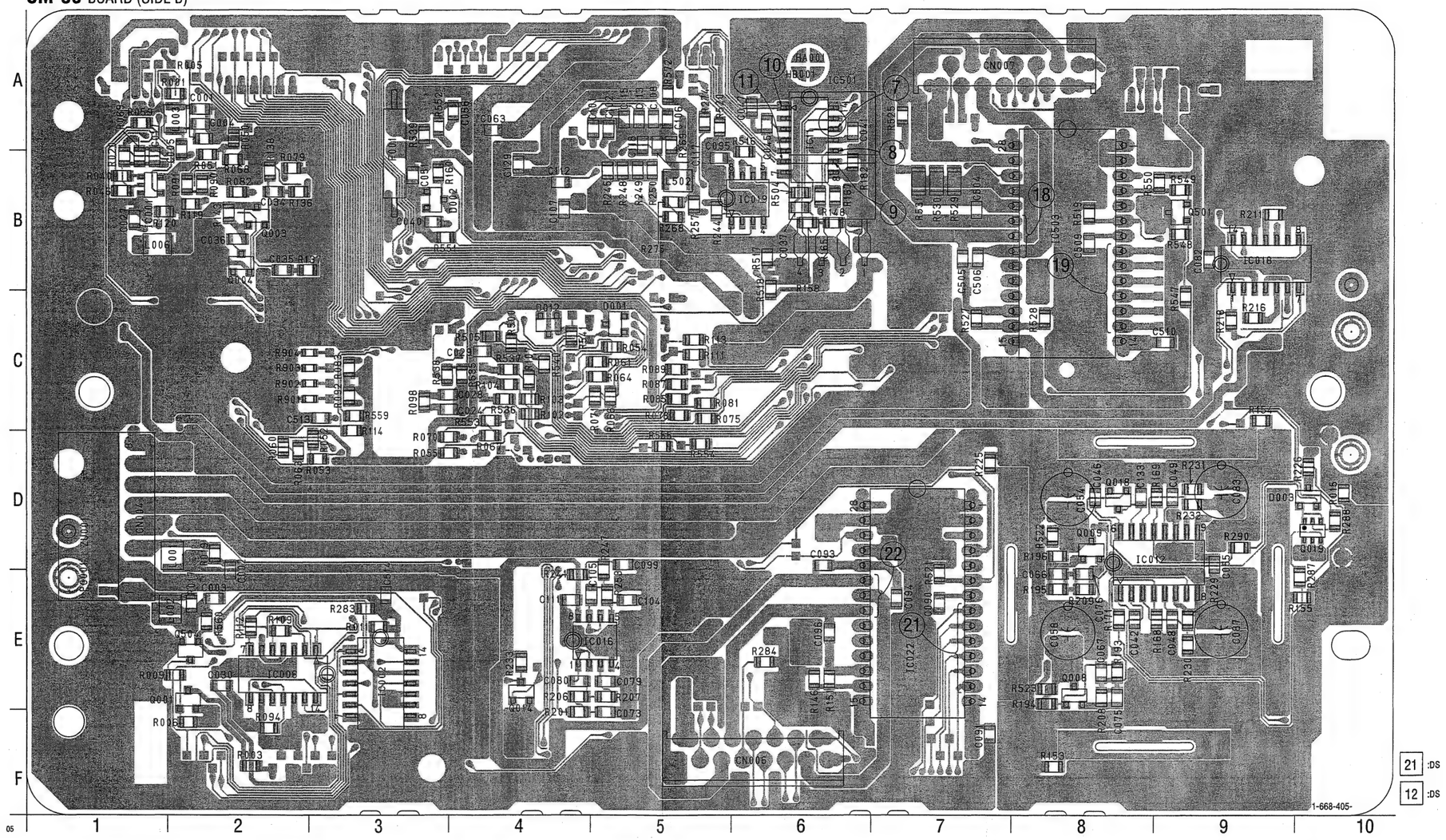
- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor

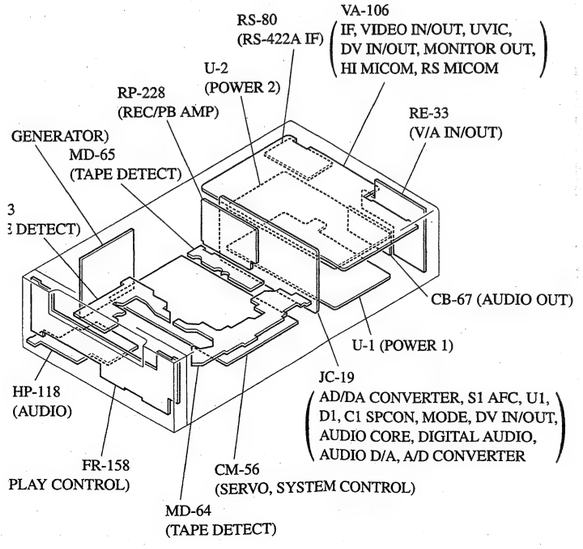




Wiring Board.
ew cases that the part isn't mounted in this model is
his diagram.
tor

CM-56 BOARD (SIDE B)





CM-56 BOARD
(SIDE B)

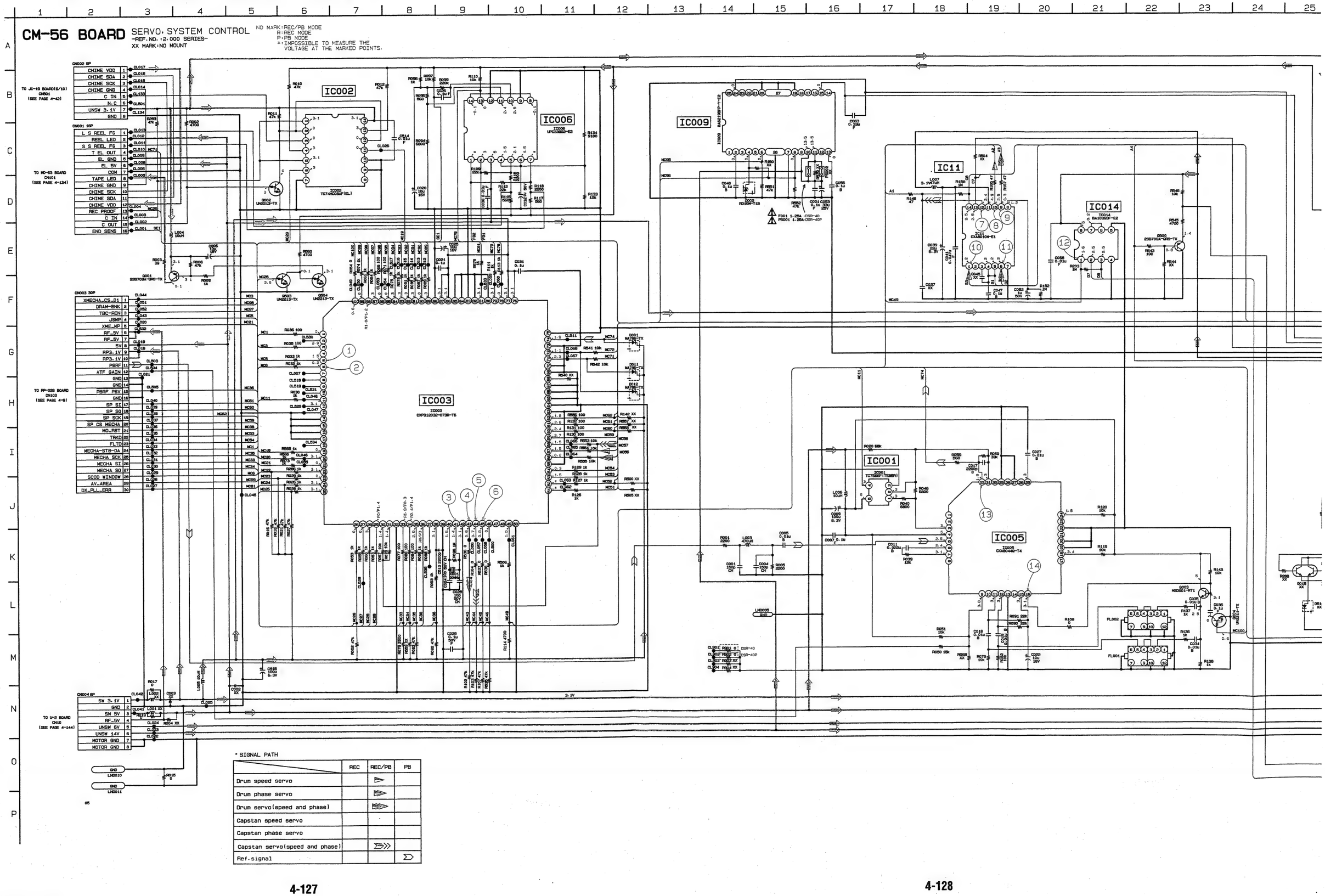
CN004	D-1
CN006	F-5
CN007	A-7
D001	C-5
D002	B-3
D012	C-4
IC001	B-1
IC002	E-3
IC006	E-2
IC011	A-6
IC012	D-8
IC016	E-4
IC018	B-9
IC019	B-6
IC022	D-7
IC501	B-6
IC503	B-8
Q001	E-2
Q003	B-2
Q004	B-2
Q008	E-8
Q009	D-8
Q014	E-4
Q501	B-9
Q504	E-2

CM-56 (SERVO, SYSTEM CONTROL) SCHEMATIC DIAGRAM

CM-56 BOARD SERVO, SYSTEM CONTROL

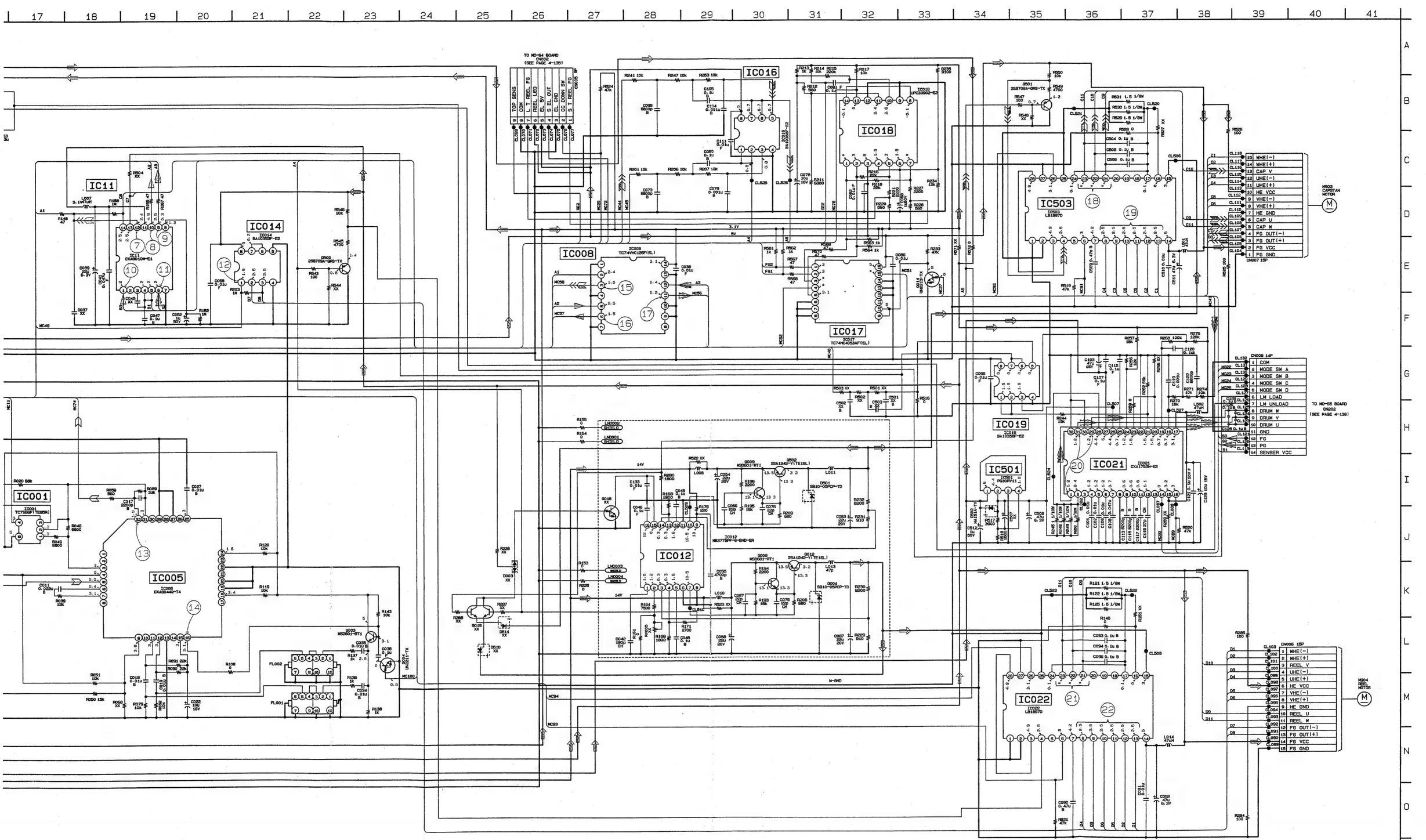
-REF. NO. :2.000 SERIES-
XX MARK:NO MOUNT

NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE
*:IMPOSSIBLE TO MEASURE THE VOLTAGE AT THE MARKED POINTS.

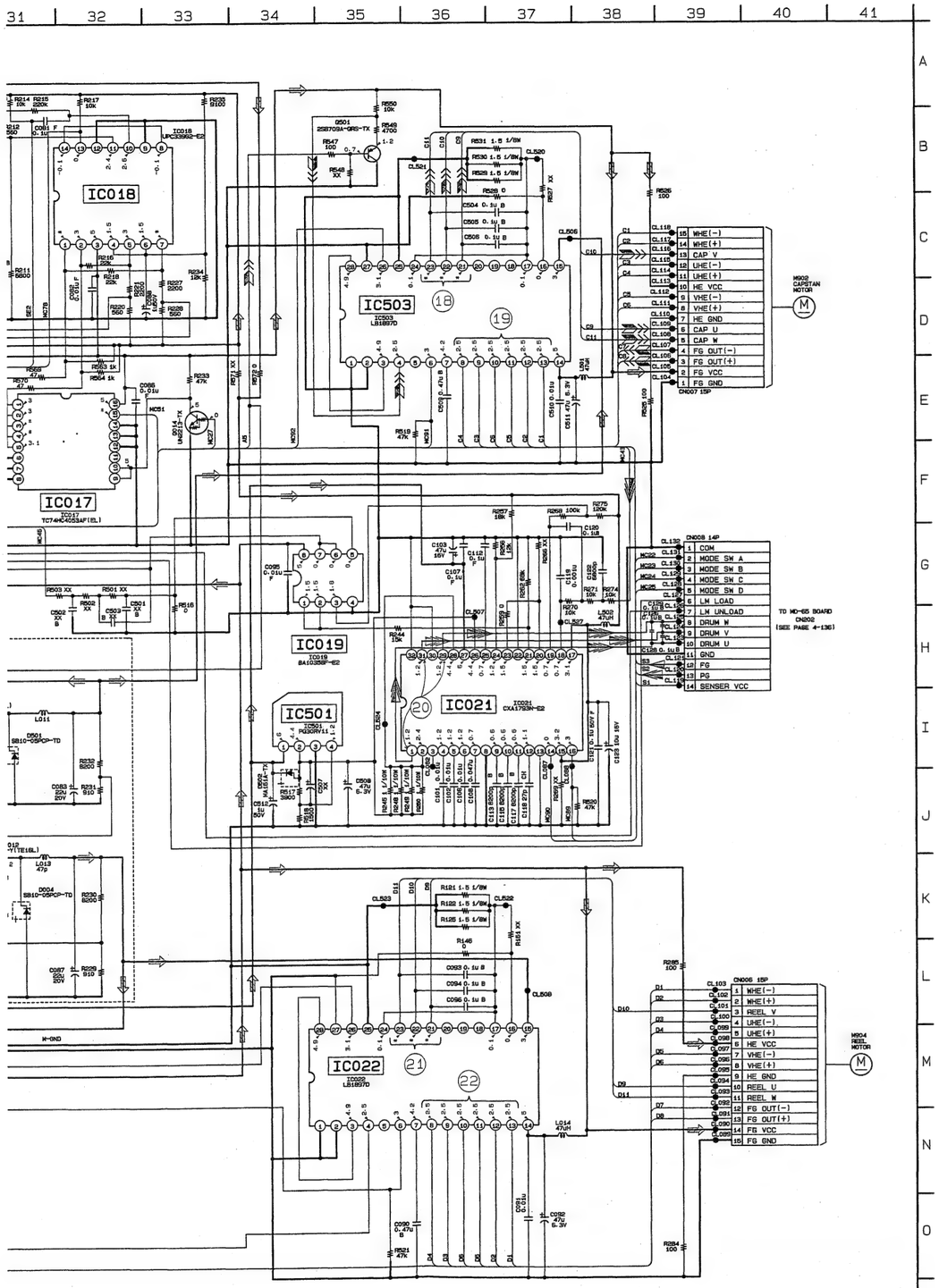


* SIGNAL PATH

	REC	REC/PB	PB
Drum speed servo		▷	
Drum phase servo		▷	
Drum servo(speed and phase)		▷	
Capstan speed servo		·	
Capstan phase servo		·	
Capstan servo(speed and phase)		▷	
Ref.signal			▷



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

CM-56 BOARD

❶ 3.0 Vp-p, 6.6 msec — IC003 ⑤ REC/PB

❷ 3.1 Vp-p, 3.3 msec — IC003 ⑥ REC/PB

❸ 1.9 Vp-p, 20 MHz — IC003 ㊶ REC/PB

❹ 3.0 Vp-p, 26 µsec — IC003 ㊸ REC/PB

❺ 3.0 Vp-p, 26 µsec — IC003 ㊹ REC/PB

❻ 3.0 Vp-p, 26 µsec — IC003 ㊺ REC/PB

❼ 5.0 Vp-p, 0.76 msec — IC011 ⑫ REC/PB

❽ 5.0 Vp-p, 1.1 msec — IC011 ⑩ REC/PB

❾ 4.8 Vp-p, 6.6 msec — IC011 ⑨ REC/PB

❿ 0.28 Vp-p, 1.1 msec — IC011 ① REC/PB

⓫ 0.03 Vp-p, 6.6 msec — IC011 ⑥ REC/PB

⓬ 3.0 Vp-p, 2.56 msec — IC014 ① REC/PB

⓭ 1.6 Vp-p, 13.2 msec — IC005 ㉜ PB

⓮ 0.5 Vp-p, 6.6 msec — IC005 ⑯ PB

⓯ 3.6 Vp-p, 0.76 msec — IC008 ③ REC/PB

⓰ 3.6 Vp-p, 1.1 msec — IC008 ⑥ REC/PB

⓱ 3.0 Vp-p, 6.6 msec — IC008 ⑪ REC/PB

⓲ 0.5 Vp-p, 100 msec — IC503 ㉑ – ㉓ REC/PB

⓳ 0.1 Vp-p, 100 msec — IC503 ⑧ – ⑬ REC/PB

⓴ 2.5 Vp-p, 1.1 msec — IC021 ① ㉙ ㉛ REC/PB

㉑ 0.1 Vp-p, 390 msec — IC022 ⑧ – ⑬ REC/PB

㉒ 1.3 Vp-p, 390 msec — IC022 ㉑ – ㉓ REC/PB

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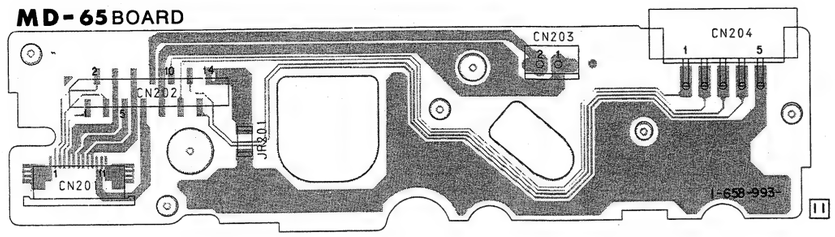
MD-63, MD-64, MD-65 (TAPE DETECT), FP-406 (TAPE SENSOR) PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAM

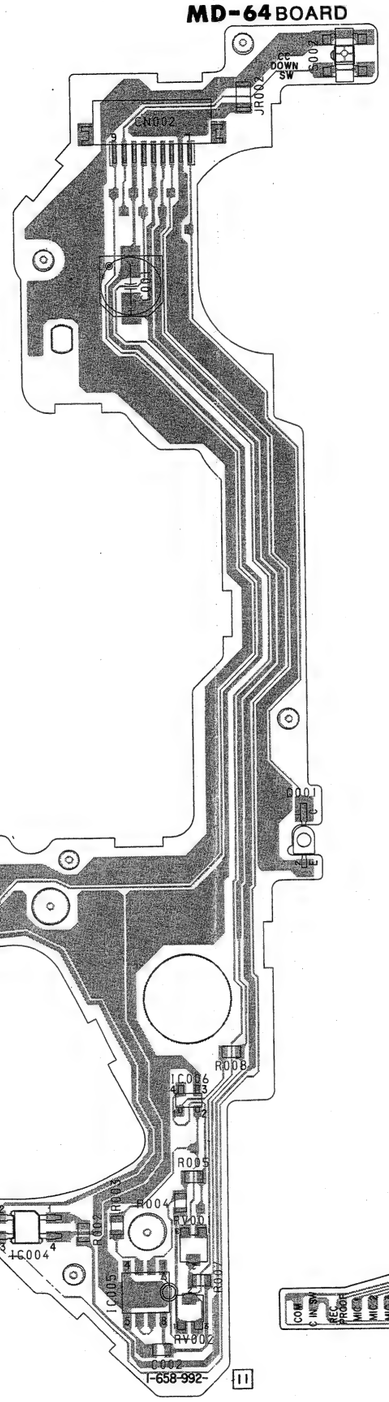
– Ref. No.: MD-63 board; 8,000/MD-64 board; 8,000/MD-65 board; 8,000/FP-406 board; 8,000 series –

- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model on this diagram.

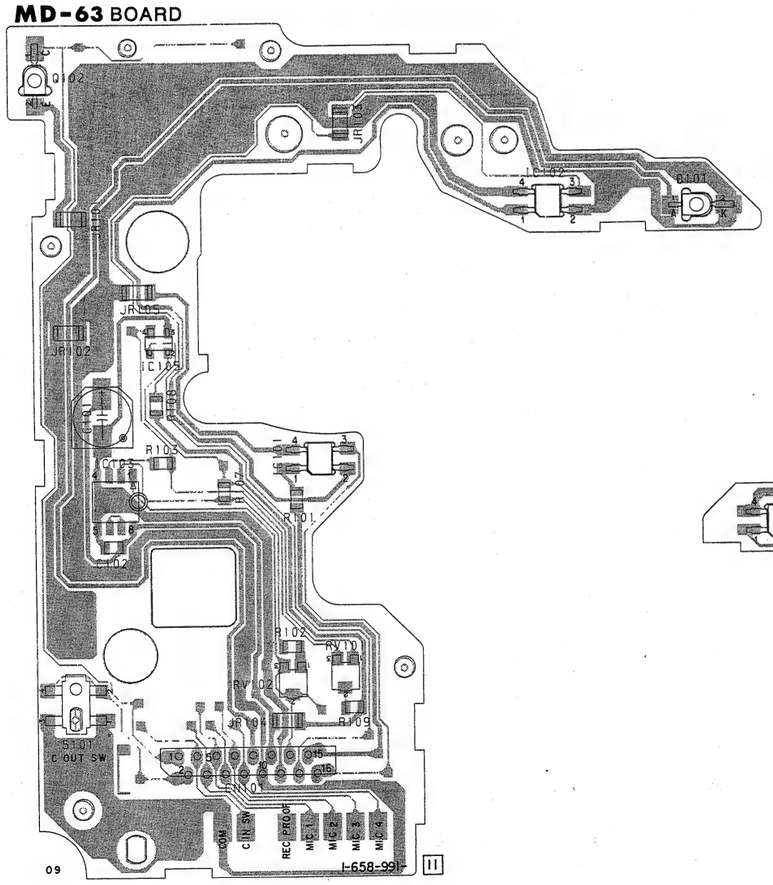
MD-65 BOARD



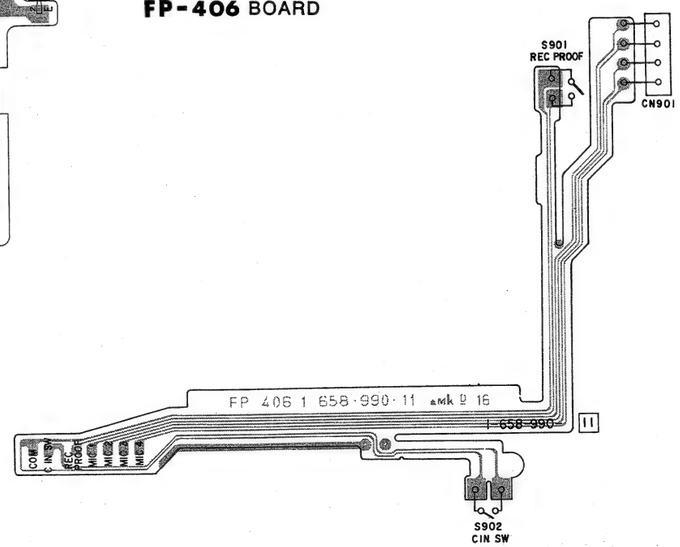
MD-64 BOARD

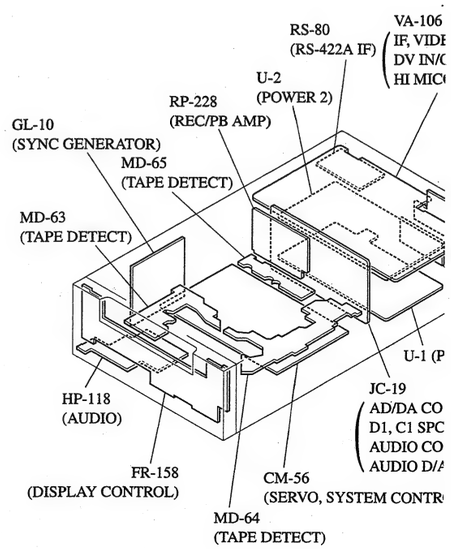


MD-63 BOARD

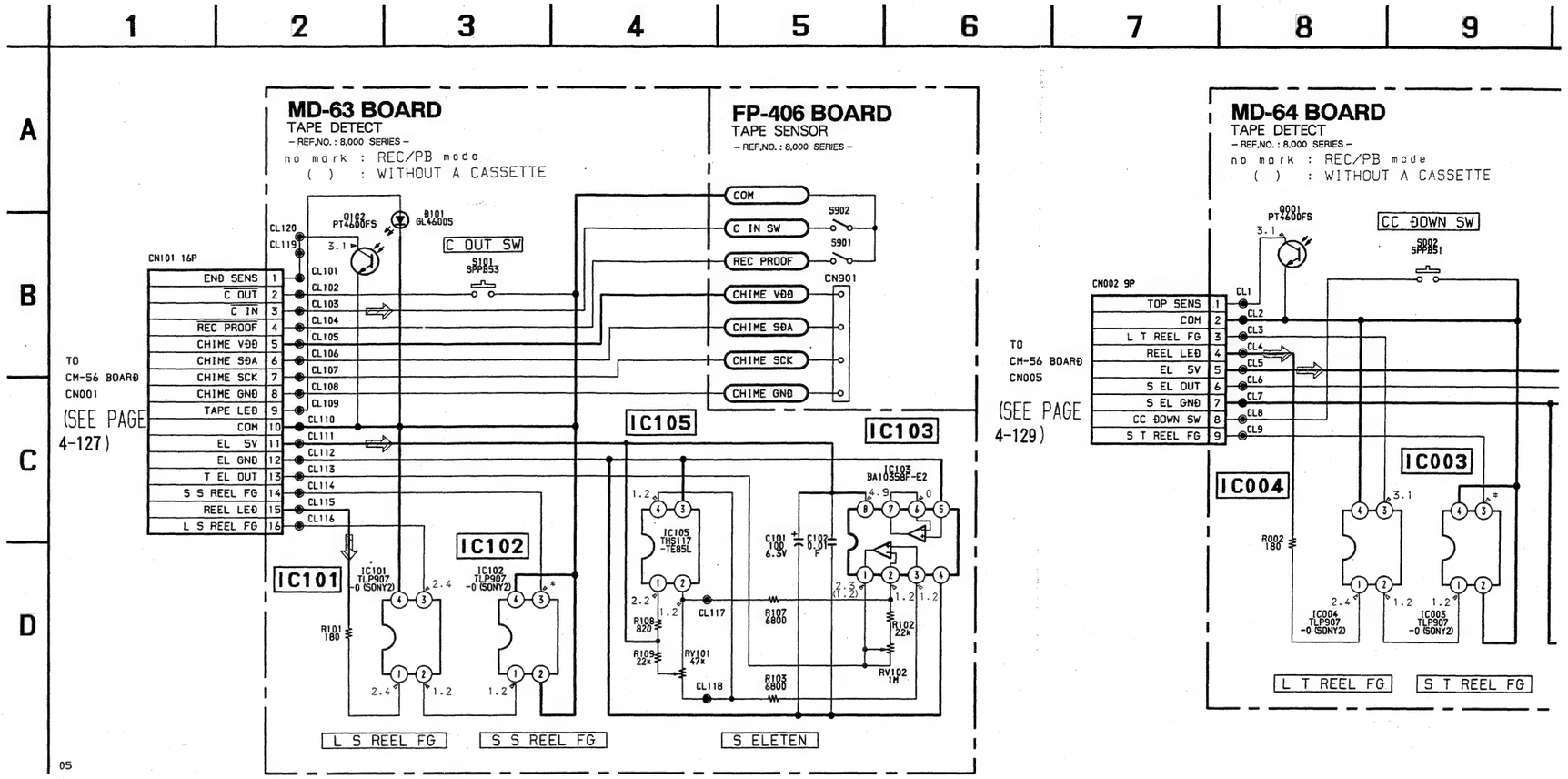


FP-406 BOARD

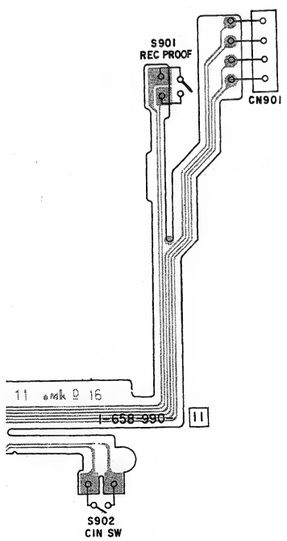


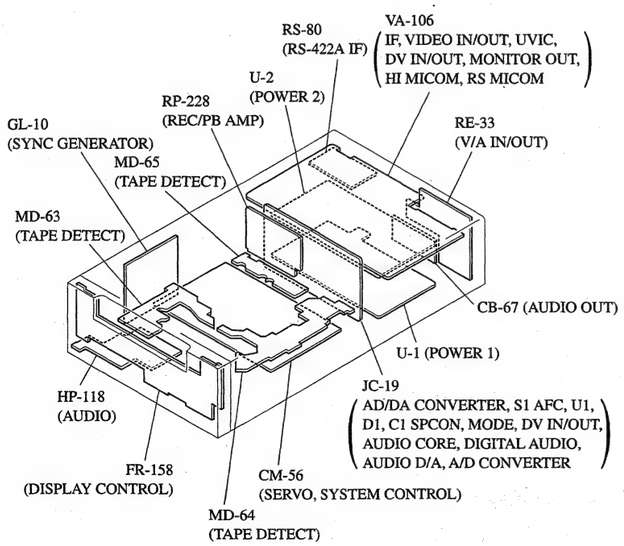


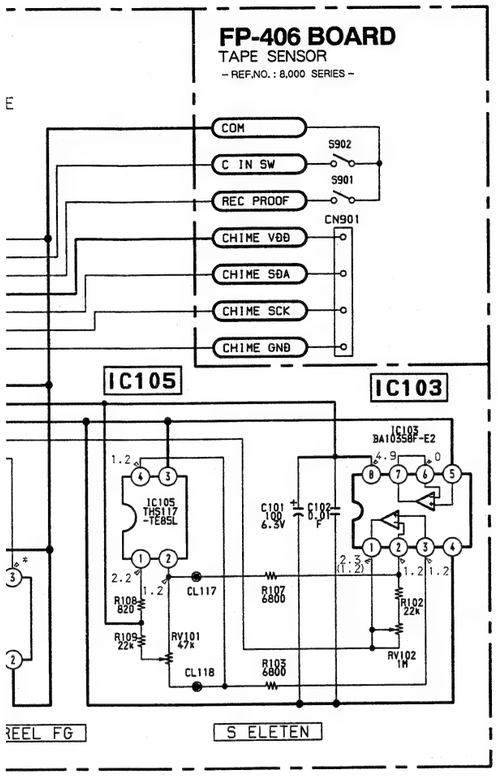
- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.

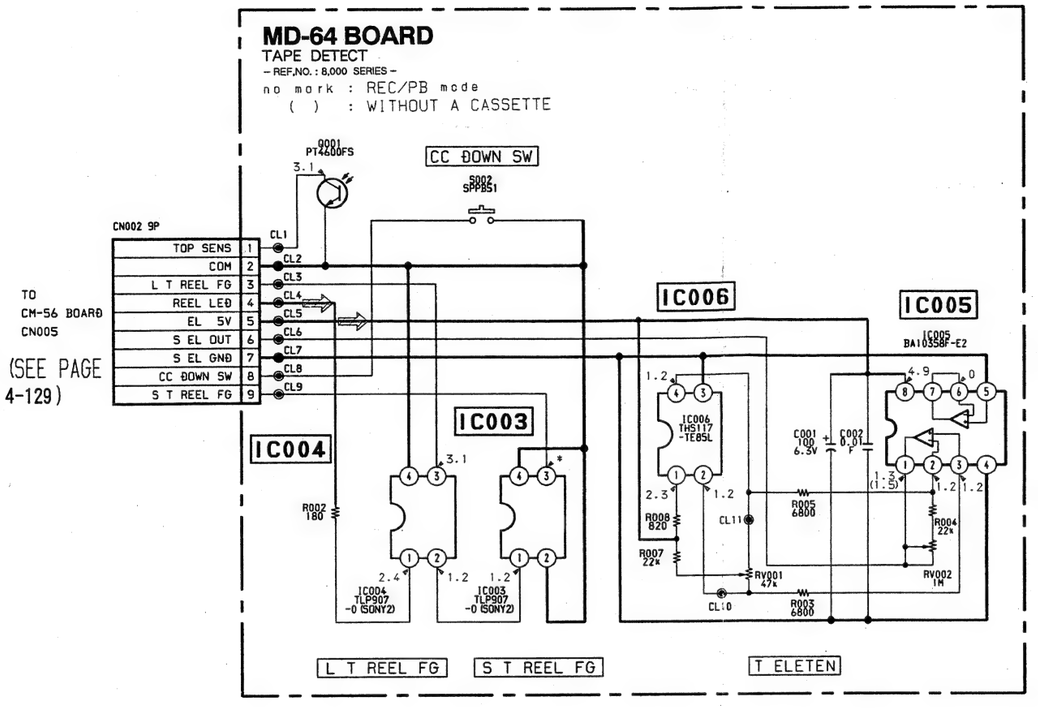


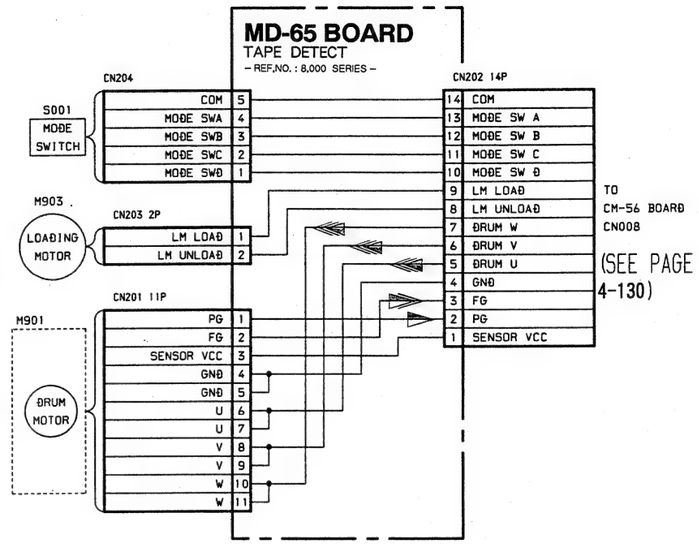
05











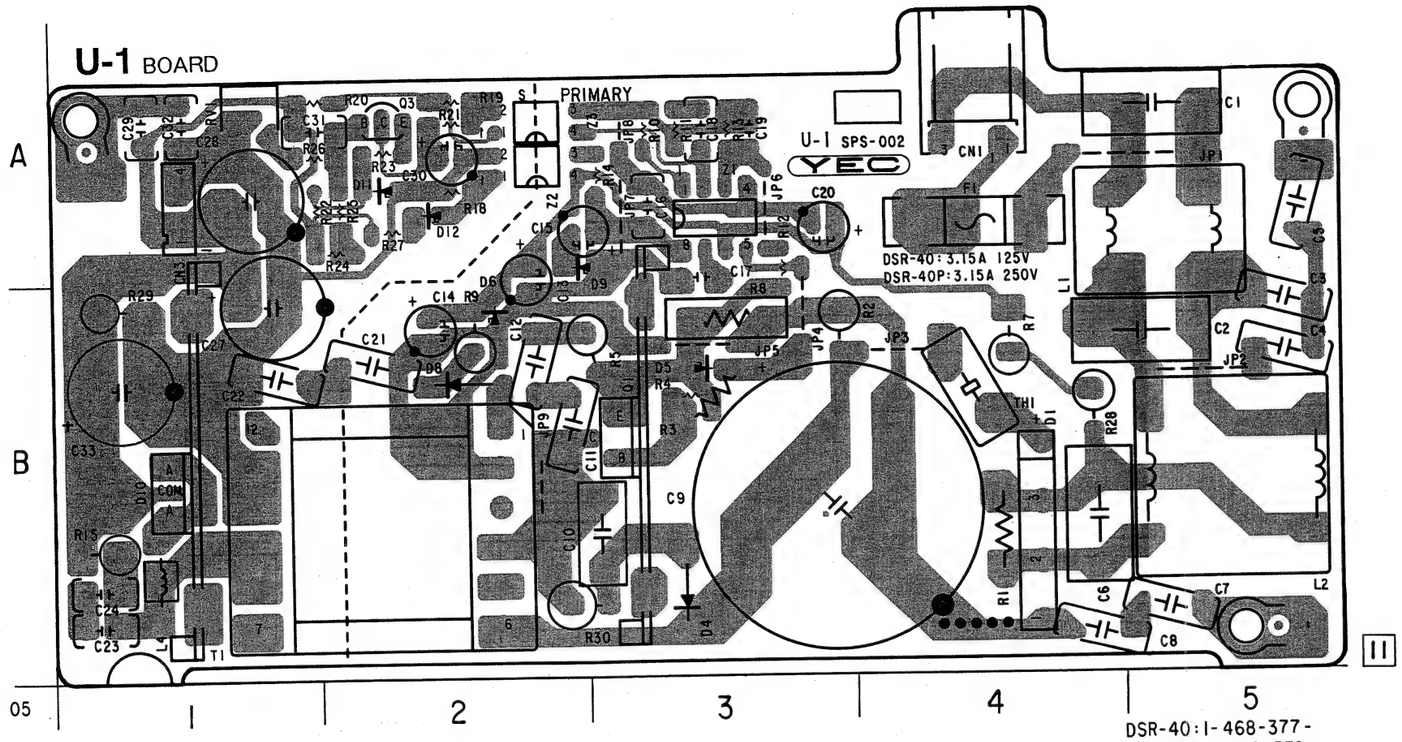
* SIGNAL PATH

	REC	REC/PB	PB
Drum speed servo		▷	
Drum phase servo		▷▷	
Drum servo(speed and phase)		▷▷▷	
Capstan speed servo			
Capstan phase servo			
Capstan servo(speed and phase)			
Ref.signal			

U-1 (POWER 1) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

– Ref. No.: U-1 board; 30,000 series –

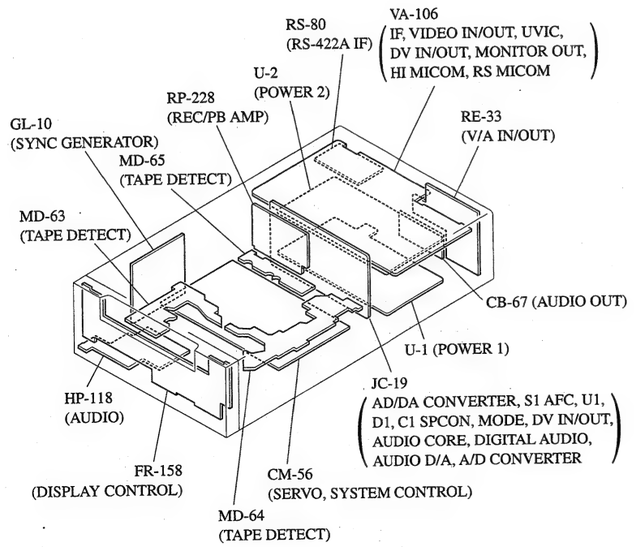
- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.

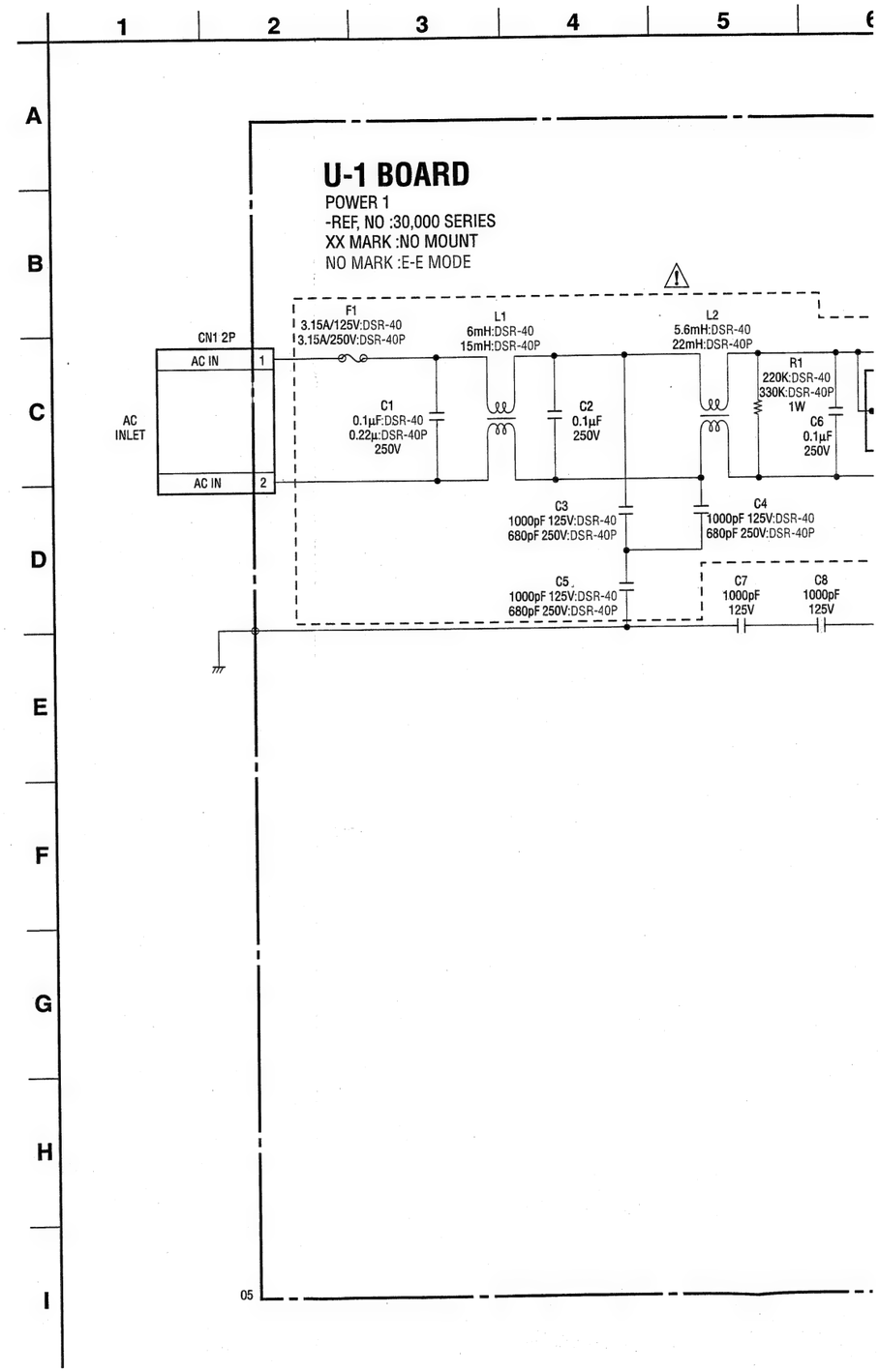


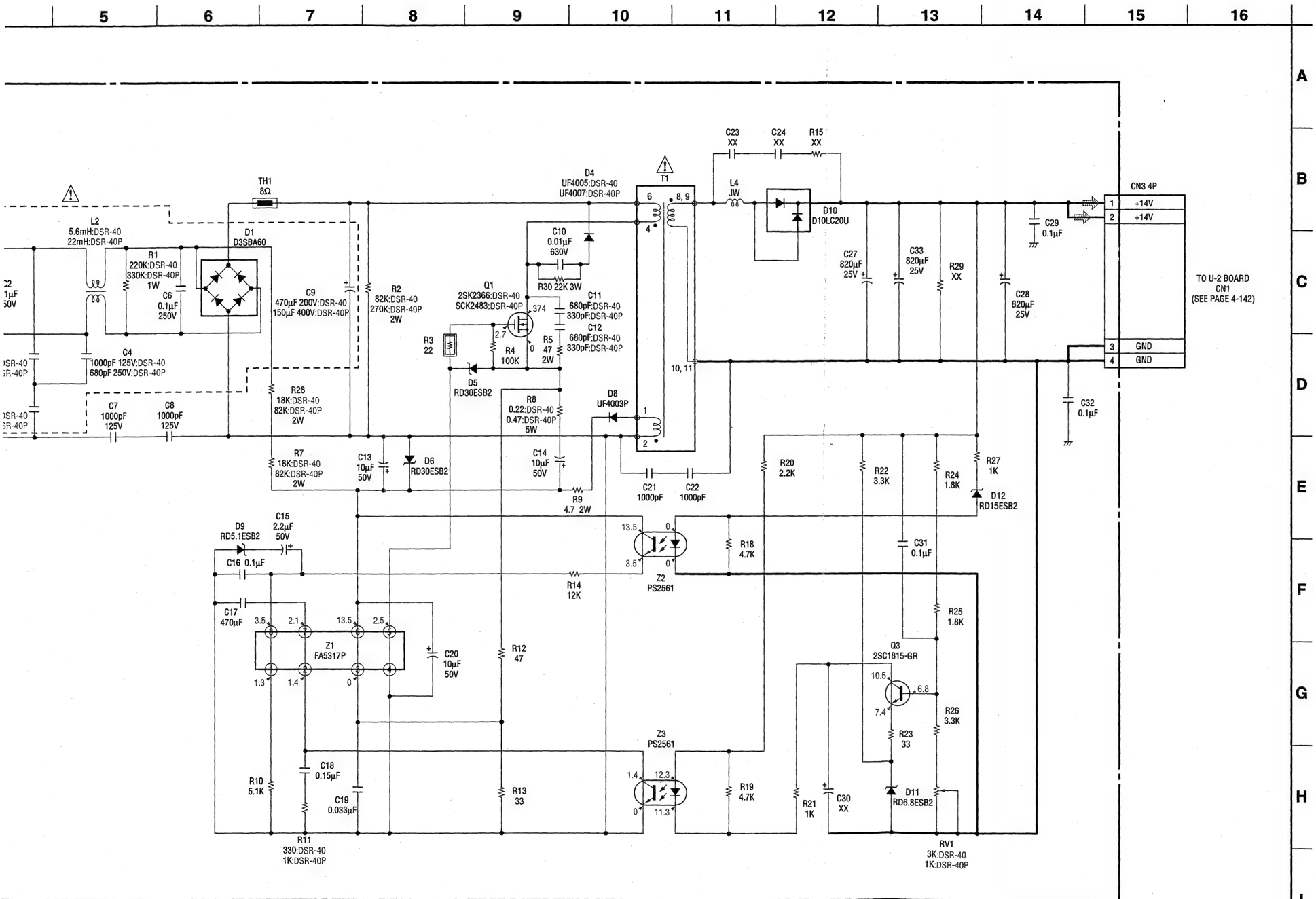
DSR-40 : 1-468-377-
DSR-40P : 1-468-378-

U-1 BOARD

CN1	A-4
CN3	A-1
D1	B-4
D4	B-3
D5	B-3
D6	B-2
D8	B-2
D9	A-2
D10	B-1
D11	A-2
D12	A-2
Q1	B-3
Q3	A-2
Z1	A-3
Z2	A-2
Z3	A-2







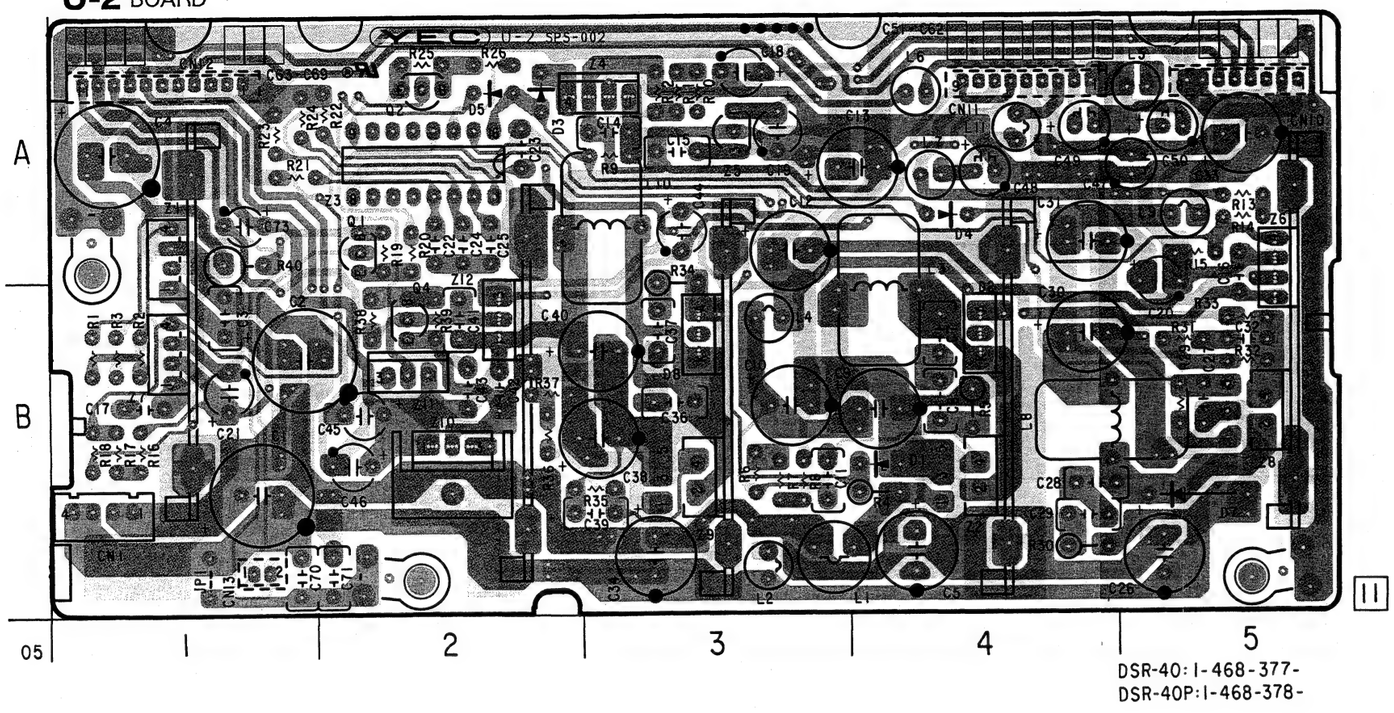
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

U-2 (POWER 2) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

– Ref. No.: U-2 board; 40,000 series –

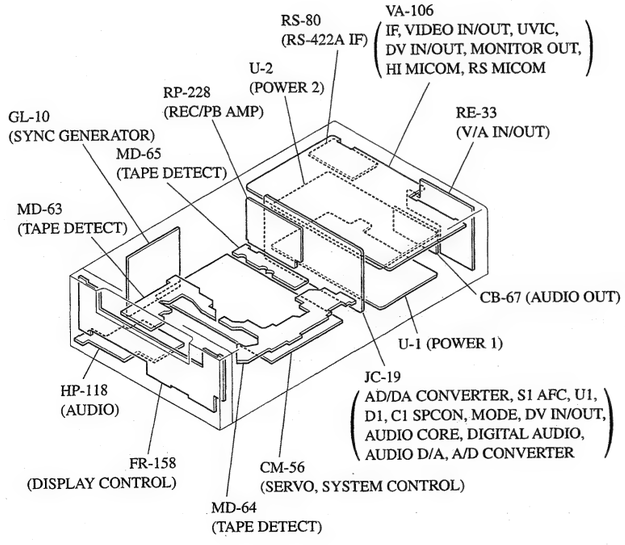
- **For Printed Wiring Board.**
- ▒▒▒ : Pattern from the side which enables seeing.
- ▒▒▒ : Pattern on the rear side.
- There are few cases that the part isn't mounted in this model is printed on this diagram.

U-2 BOARD



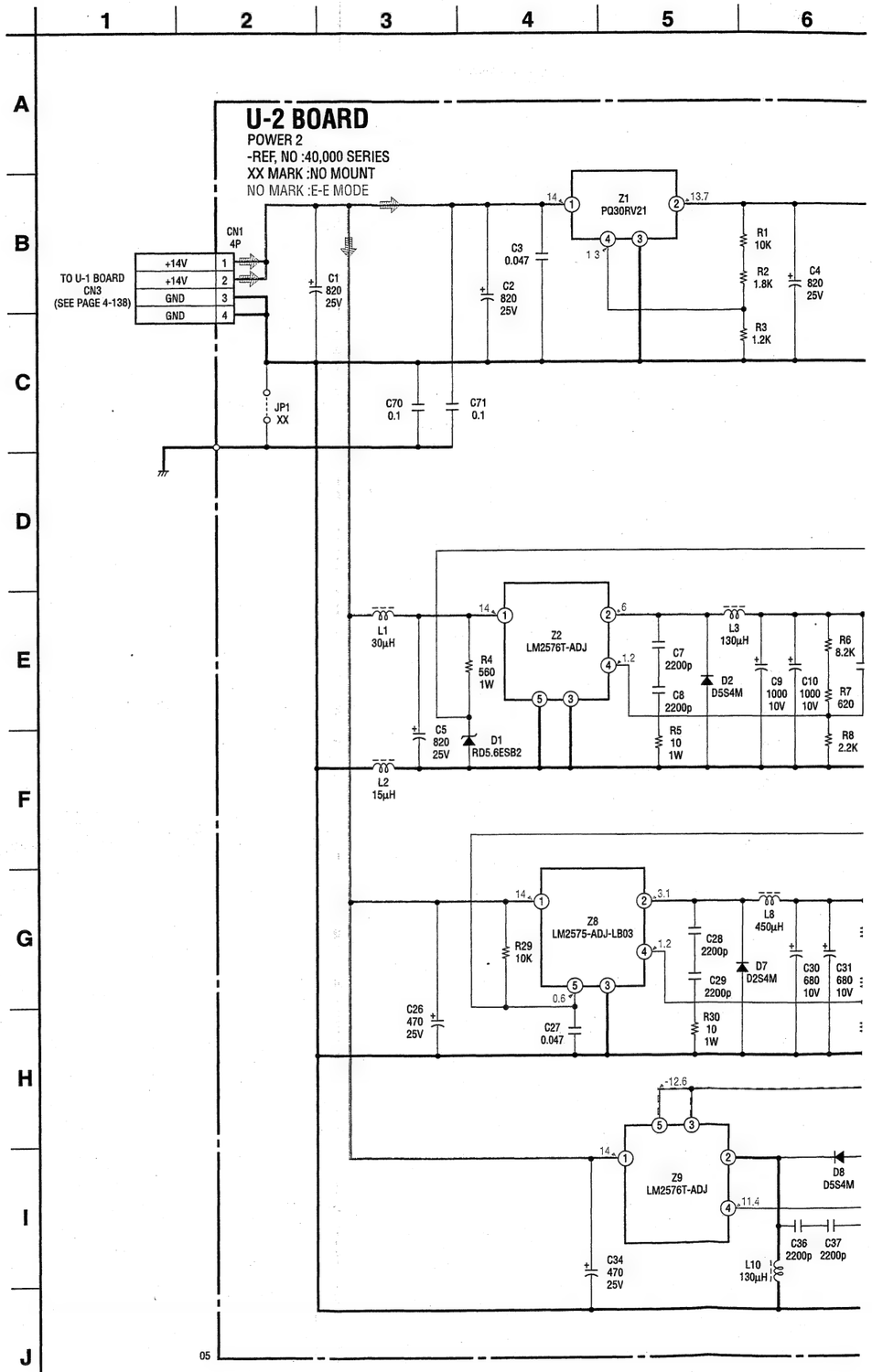
U-2 BOARD

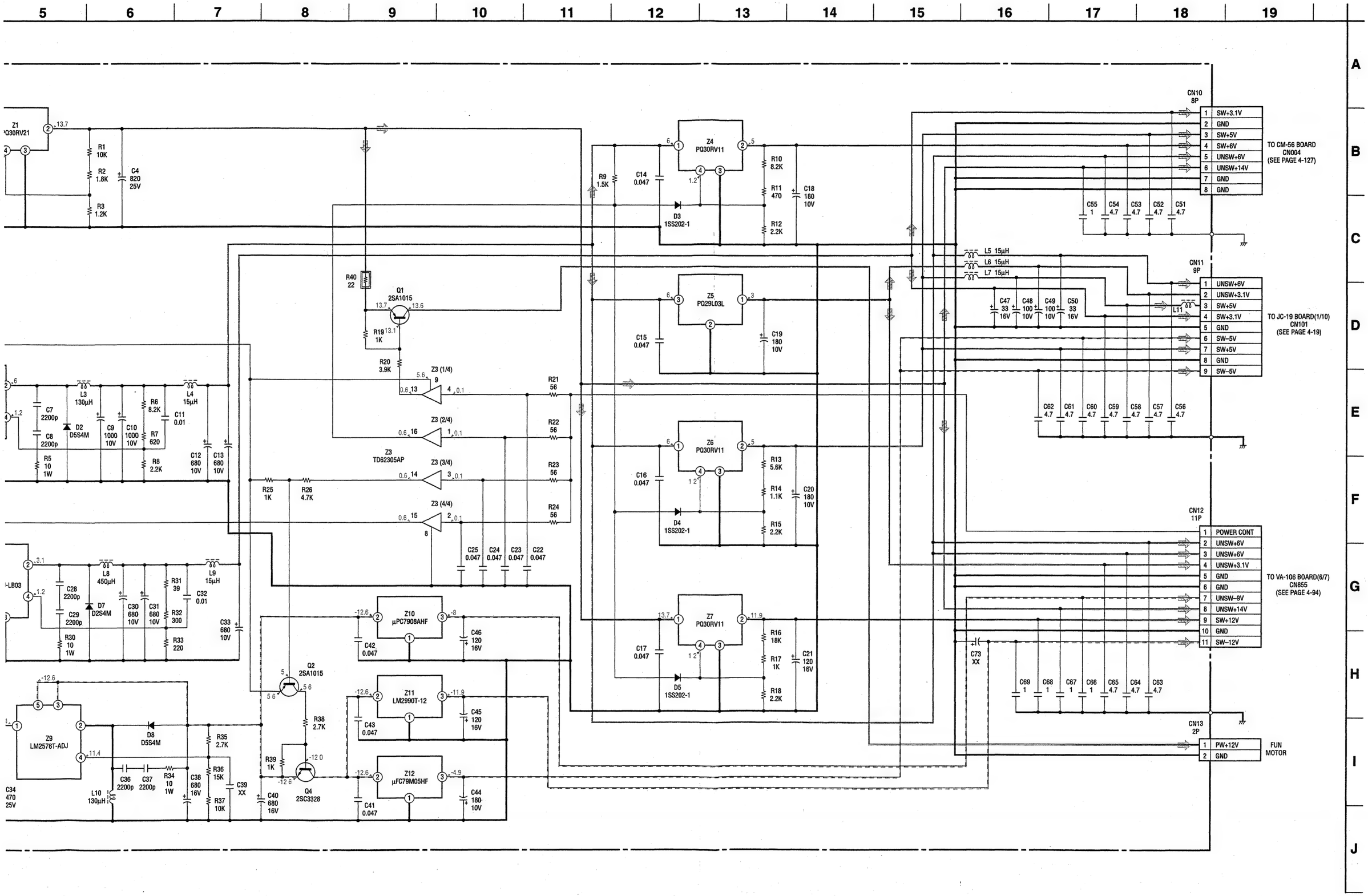
CN1	B-1
CN10	A-5
CN11	A-4
CN12	A-1
CN13	B-1
D1	B-4
D2	B-4
D3	A-2
D4	A-4
D5	A-2
D7	B-5
D8	B-3
Q1	A-2
Q2	A-2
Q4	B-2
Z1	A-1
Z2	B-4
Z3	A-2
Z4	A-3
Z5	A-3
Z6	A-5
Z7	B-1
Z8	B-5
Z9	B-3
Z10	B-2
Z11	B-2
Z12	B-2



POWER 2
U-2

V23312 / Druck 83




5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
A B C D E F G H I J
Z1 PQ30RV21
R1 10K
R2 1.8K
R3 1.2K
C4 820 25V
R9 1.5K
C14 0.047
Z4 PQ30RV11
R10 8.2K
R11 470
R12 2.2K
C18 180 10V
D3 1SS202-1
R40 22
Q1 2SA1015
R19 1K
R20 3.9K
Z3 (1/4)
Z3 (2/4)
Z3 (3/4)
Z3 (4/4)
Z3 TD62305AP
R21 56
R22 56
R23 56
R24 56
R25 1K
R26 4.7K
C25 0.047
C24 0.047
C23 0.047
C22 0.047
C15 0.047
Z5 PQ29L03L
C19 180 10V
C16 0.047
Z6 PQ30RV11
R13 5.6K
R14 1.1K
R15 2.2K
C20 180 10V
D4 1SS202-1
C17 0.047
Z7 PQ30RV11
R16 18K
R17 1K
R18 2.2K
C21 120 16V
D5 1SS202-1
L3 130µH
L4 15µH
C7 2200p
C8 2200p
D2 D5S4M
C9 1000 10V
C10 1000 10V
R6 8.2K
R7 620
C11 0.01
R8 2.2K
R5 10 1W
C12 680 10V
C13 680 10V
L8 450µH
L9 15µH
C28 2200p
C29 2200p
D7 D2S4M
C30 680 10V
C31 680 10V
R31 39
R32 300
R33 220
C32 0.01
R30 10 1W
C33 680 10V
Z10 µPC7908AHF
C42 0.047
C46 120 16V
Q2 2SA1015
Z11 LM2990T-12
C43 0.047
C45 120 16V
R38 2.7K
R39 1K
Q4 2SC3328
Z12 µFC79M05HF
C41 0.047
C44 180 10V
Z9 LM2576T-ADJ
D8 D5S4M
R35 2.7K
R36 15K
R37 10K
C36 2200p
C37 2200p
R34 10 1W
C38 680 16V
C39 XX
L10 130µH
C34 470 25V
C40 680 16V
L5 15µH
L6 15µH
L7 15µH
L11
C47 33 16V
C48 100 10V
C49 100 10V
C50 33 16V
C55 1
C54 4.7
C53 4.7
C52 4.7
C51 4.7
C62 4.7
C61 4.7
C60 4.7
C59 4.7
C58 4.7
C57 4.7
C56 4.7
C73 XX
C69 1
C68 1
C67 1
C66 1
C65 4.7
C64 4.7
C63 4.7
CN10 8P
1 SW+3.1V
2 GND
3 SW+5V
4 SW+6V
5 UNSW+6V
6 UNSW+14V
7 GND
8 GND
TO CM-56 BOARD CN004 (SEE PAGE 4-127)
CN11 9P
1 UNSW+6V
2 UNSW+3.1V
3 SW+5V
4 SW+3.1V
5 GND
6 SW–5V
7 SW+5V
8 GND
9 SW–5V
TO JC-19 BOARD(1/10) CN101 (SEE PAGE 4-19)
CN12 11P
1 POWER CONT
2 UNSW+6V
3 UNSW+6V
4 UNSW+3.1V
5 GND
6 GND
7 UNSW–9V
8 UNSW+14V
9 SW+12V
10 GND
11 SW–12V
TO VA-106 BOARD(6/7) CN855 (SEE PAGE 4-94)
CN13 2P
1 PW+12V
2 GND
FUN MOTOR

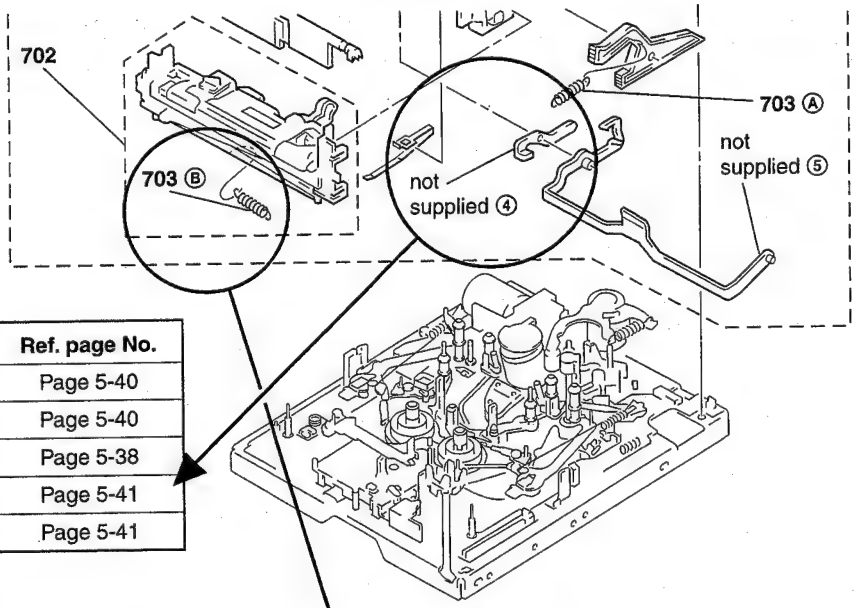
SECTION 5
ADJUSTMENTS

5-1. MECHANICAL SECTION ADJUSTMENTS

5-1-1. INFORMATION

1-1. HOW TO SEARCH REFERENCE PAGES FOR REMOVAL

- To facilitate finding the required pages on how to removing and attaching parts, reference pages are listed in the remarks of the exploded views (6-4 to 6-9 pages) in the 5-1. Mechanical Section Adjustment.



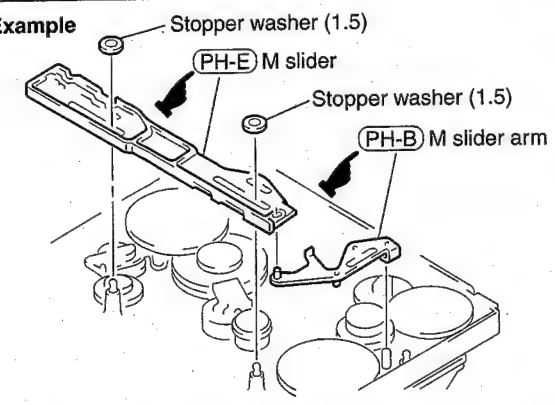
not supplied	Ref. page No.
①	Page 5-40
②	Page 5-40
③	Page 5-38
④	Page 5-41
⑤	Page 5-41

Ref. No.	Part No.	Description	Ref. Page No.
* 701	A-7092-644-A	FL BLOCK ASSY	(5-2)
702	A-7092-647-A	SLOAT BLOCK ASSY, C	(5-41)
703	3-967-604-01	SPRING (DB), TENSION	(Ⓐ:5-40/Ⓑ:5-41)
704	3-967-655-01	DOOR, C	(5-40)
705	3-967-613-01	SPRING (HS), TENSION COIL	(5-41)
708			
709			
710			
711			
712			

1-2. PHASE ADJUSTMENT MARK "(PH-)"

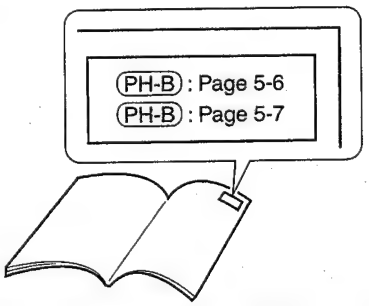
Numerous phase adjustments must be performed for removing and attaching parts (replacing parts) of the E mechanism. When removing and attaching parts, be sure to check the phase adjustment of corresponding parts. Parts that need phase adjustment are indicated with (PH-) mark. When replacing parts indicated with (PH-) mark, check their positions and phases so that the parts are attached smoothly in later.

Example



In case of the above figure, refer to Ⓑ and Ⓔ of "5-1-3. PHASE ADJUSTMENTS"

Example



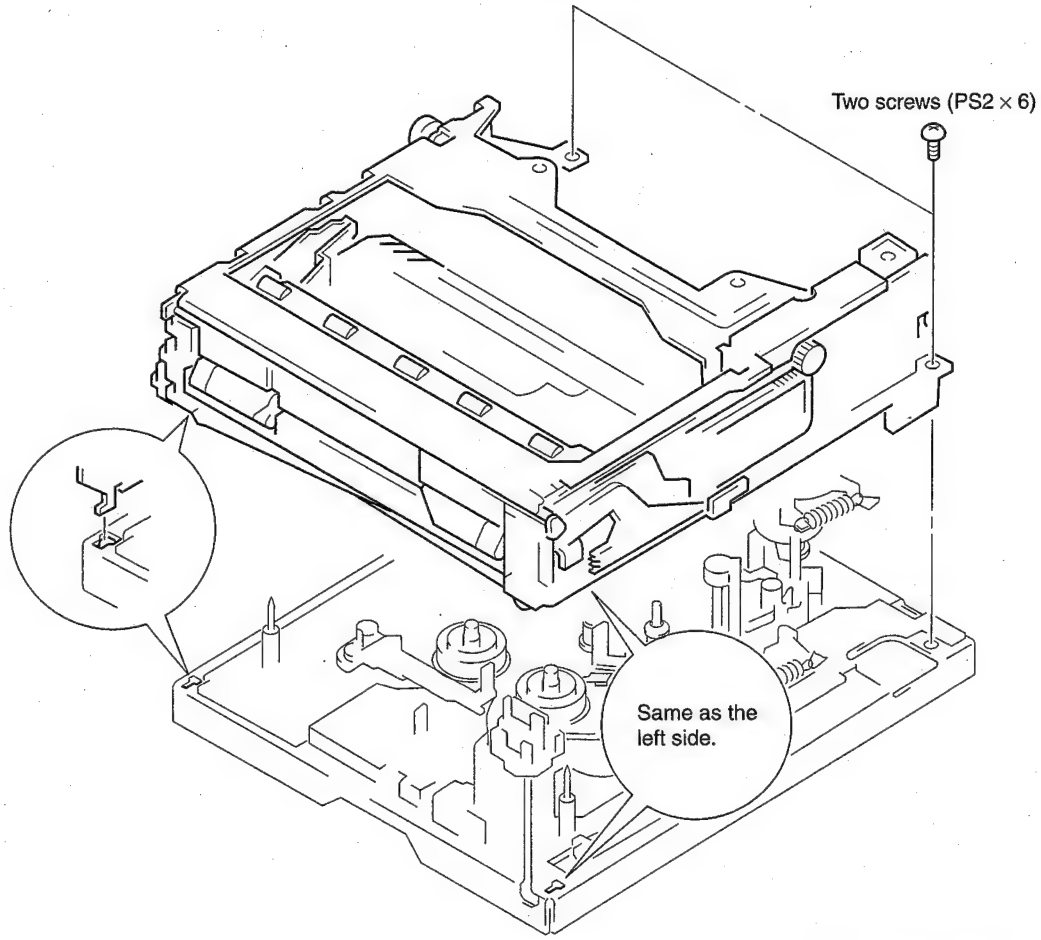
The reference pages of phase adjustment are appeared on the top of the right in each page.

5-1-2. PREPARATION FOR MECHANICAL CHECK, ADJUSTMENT AND MAINTENANCE

2-1. FL BLOCK ASSEMBLY

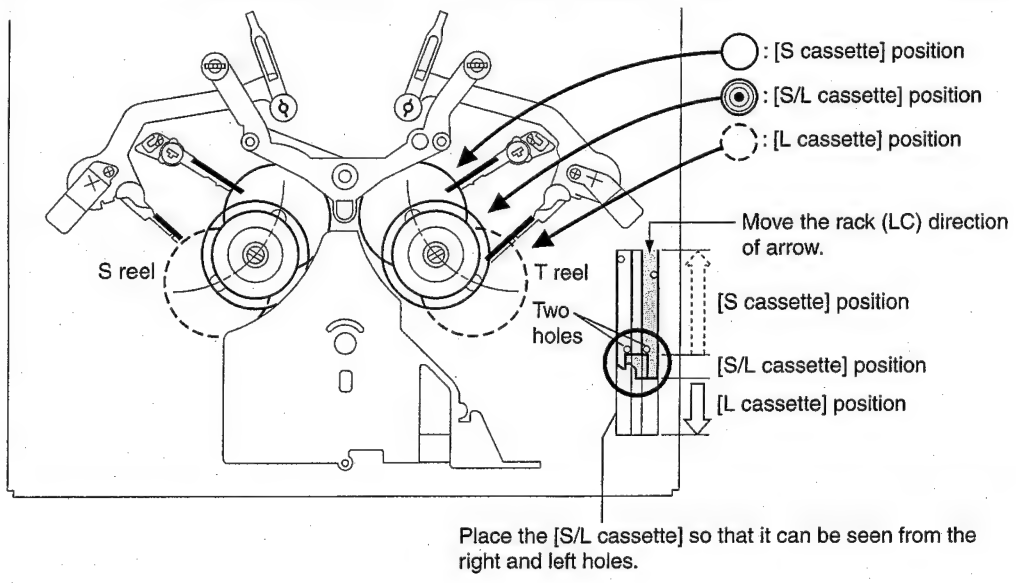
- **Removing/Attaching**

- For removal of mcechanism deck, refer to 2-5. Removal of MD BLOCK ASSEMBLY.



Fixing torque: 0.2942 N•m (3.0 kg•cm)

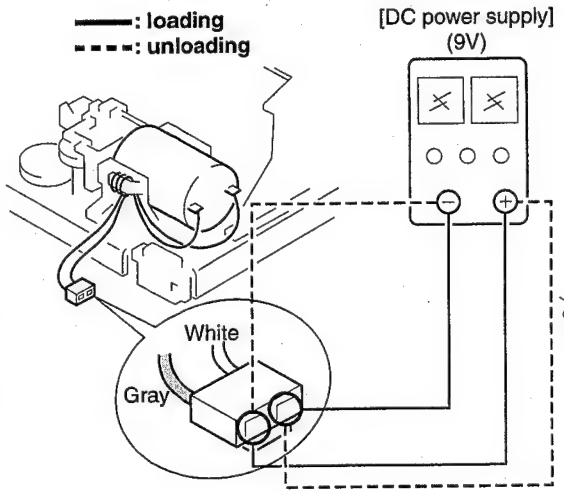
2-2. CASSETTE POSITIONS



2-3. LOADING/UNLOADING

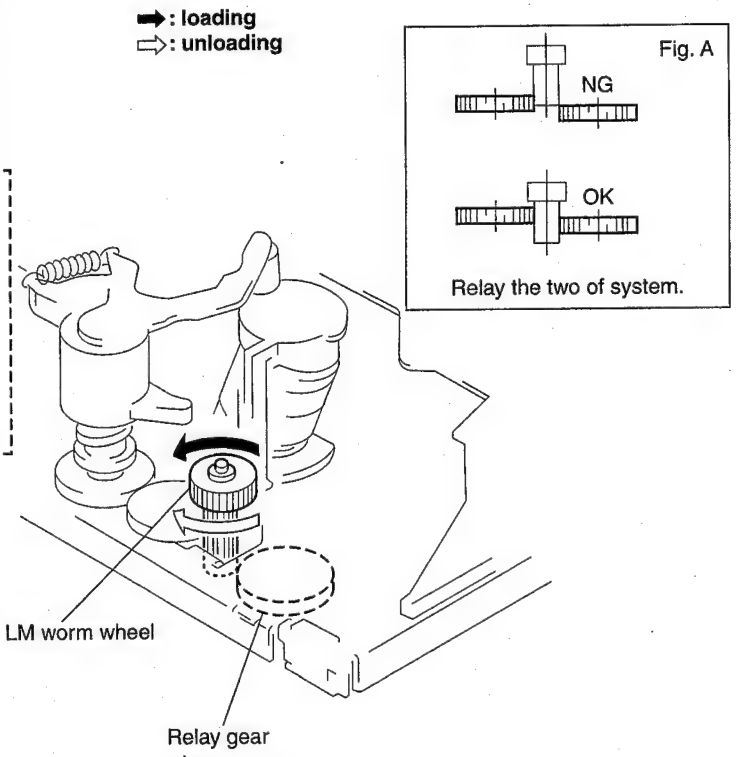
[Using the DC power supply] : With a loading motor

Note: Be sure to disconnect the connector of the loading motor before servicing.



[Manual] : Without a loading motor

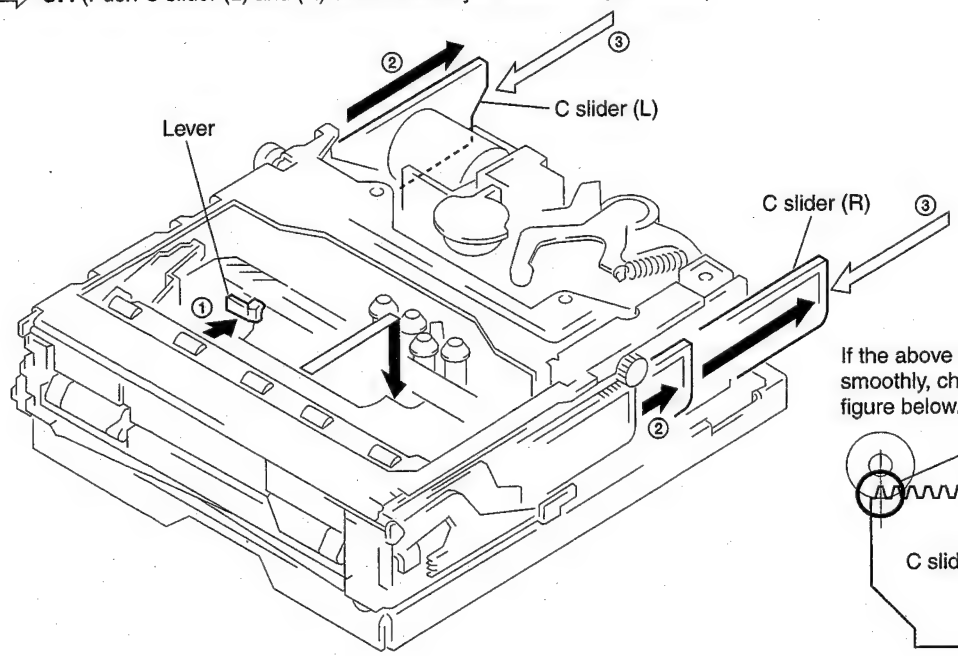
Note: If the LM worm wheel is rotated in the state shown in figure A (not engaged with the relay gear), the phases of the pinch drive system and the loading drive system will shift. (Refer to phase adjustment ⑥ on page 5-7 for details of phase adjustment)



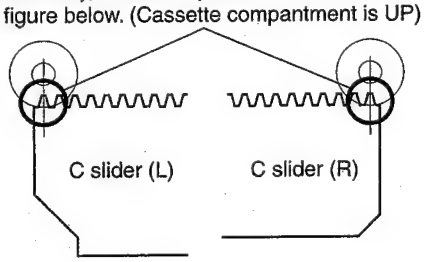
2-4. MANUAL UP/DOWN THE FL BLOCK

DOWN. (While pushing the lever in the arrow ① direction, push C slider (L) and (R) simultaneously in the arrow ③ direction)

UP. (Push C slider (L) and (R) simultaneously in the arrow ③ direction)



If the above operation cannot be performed smoothly, check the phase as shown in the figure below. (Cassette compartment is UP)



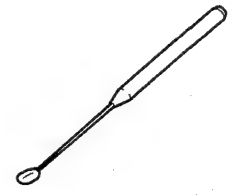
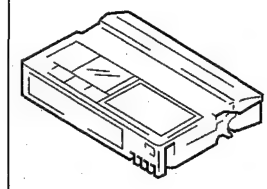
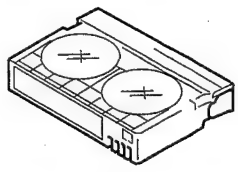
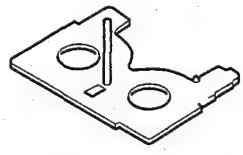
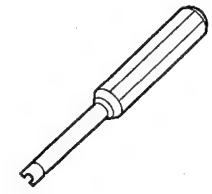
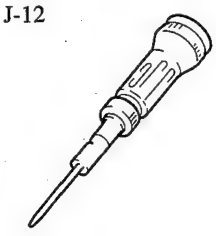
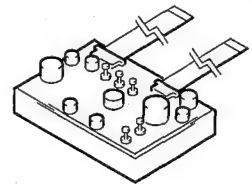
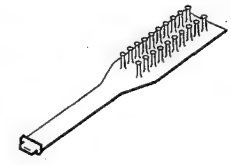
2-5. SERVICE JIGS LIST

Ref. No.	Name	Part No.	Fixtur No.	Usage, Others Application, etc
J-1	Cleaning fluid	Y-2031-001-0		For cleaning drum assembly and tape guide
J-2	Wiping cloth	7-741-900-53		For cleaning drum assembly
J-3	Super fine applicator (Made by NIPPON APPLICATOR (P752D))			For cleaning tape guide
J-4	Mirror (Small oval type)	J-6080-840-A	GD-2038	Tape path
J-5	Tracking tape (XH2-1AST) Standard cassette Tracking tape (XH2-1ASE) Standard cassette Tracking tape (XH2-1A1) Mini cassette	8-967-999-01 8-967-999-06 8-967-999-03		Tape path (for tape top checking) Tape path (for tape end checking) Tape path (for checking)
J-6	Mini DV torque cassette	J-6082-360-A		For adjusting FWD/RVS back tension
J-7	Cassette standard plate (D/E mechanism)	J-6082-330-A		For adjusting tape guide and reel table
J-8	Reel standard plate (D/E mechanism)	J-6082-331-A		For adjusting reel table
J-9	TG2/7 preset plate	J-6082-358-A		For adjusting tape guide
J-10	Screwdriver for tape path	J-6082-026-A		For adjusting tape guide
J-11	Adjusting remote commander (RM-95 remodeled partly) Note 1	J-6082-053-B		Tape path
J-12	Torque driver	J-9049-330-A		Mechanism check and replacement
J-13	Tension regulator adjustment board	J-6082-359-A		Electric tension regulator adjustment
J-14	CPC 8-jig	J-6082-388-A		Tape path

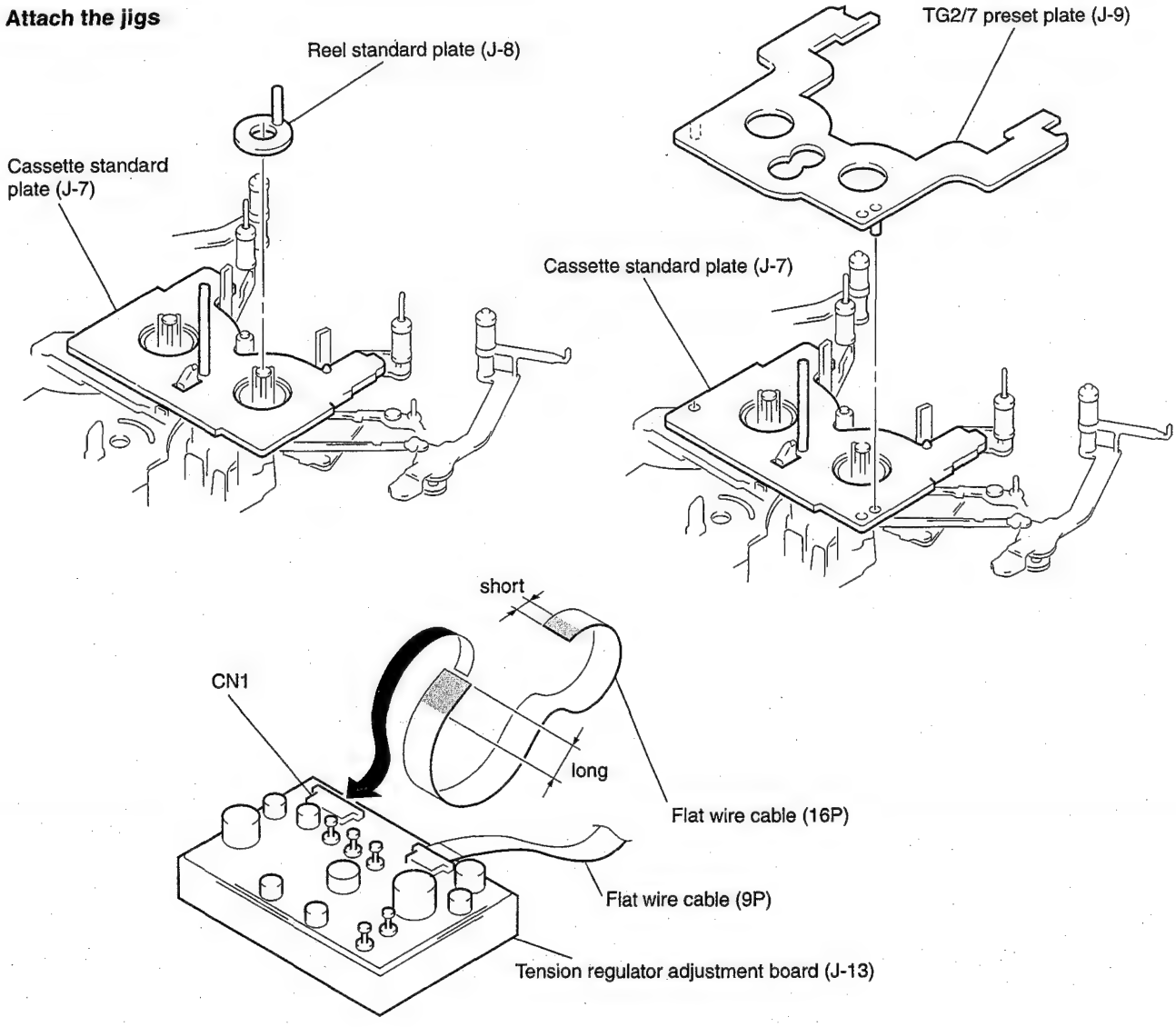
Other equipment used
- Oscilloscope
- DC power supply
- Digital voltage meter

Note 1: If the micro processor IC in the adjusting remote commander is not the new micro processor (UPD7503G-C56-12), the pages cannot be switched.
In this case, replace with the new micro processor (8-759-148-35).

Tape path:
1. Make a checking and adjustment at the tape top using the XH1-1AST tape.
2. Then, make a checking with the XH2-1ASE (for tape end) and XH2-1A1 (Mini cassette for tape top and end).
3. Again make a checking with the XH2-1AST.

J-1 	J-2 	J-3 	J-4 	J-5 
J-6 	J-7 	J-8 	J-9 	J-10 
J-11 	J-12 	J-13 	J-14 	

- **Attach the jigs**

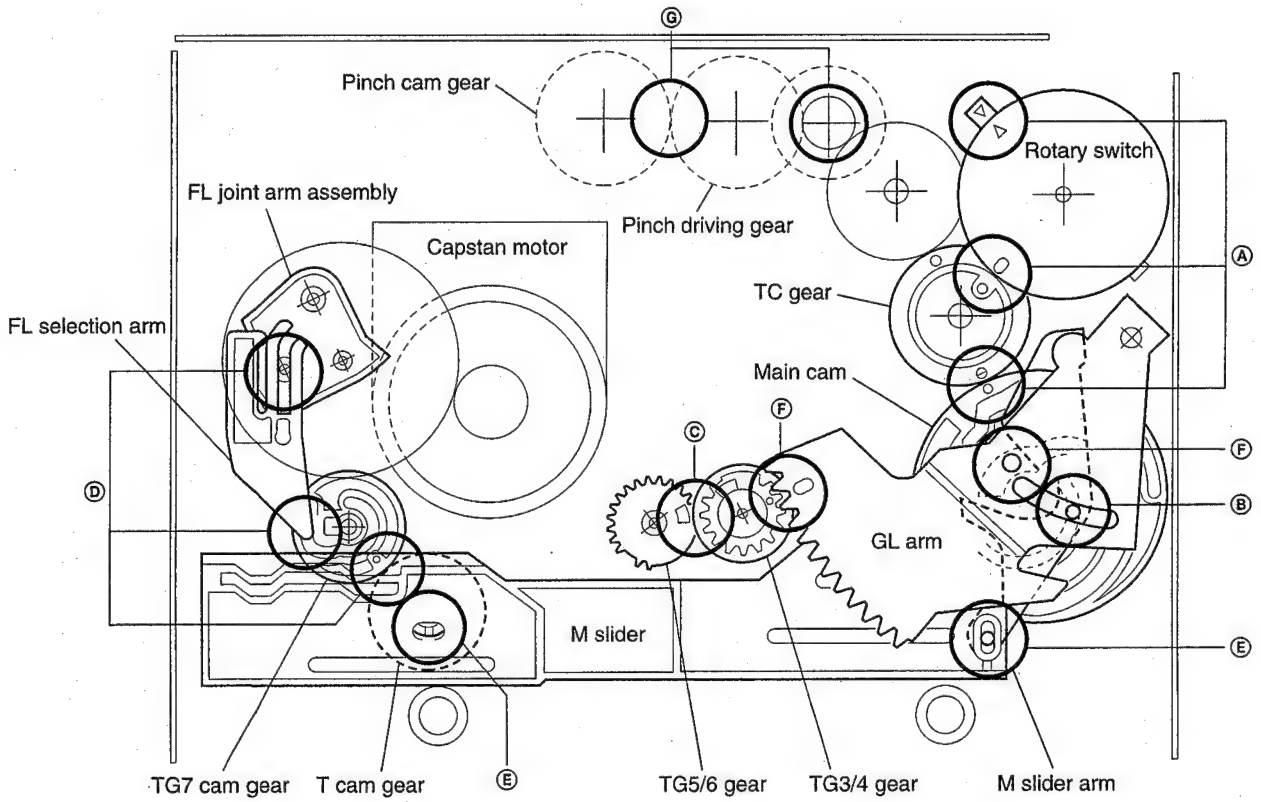


5-1-3. PHASE ADJUSTMENTS

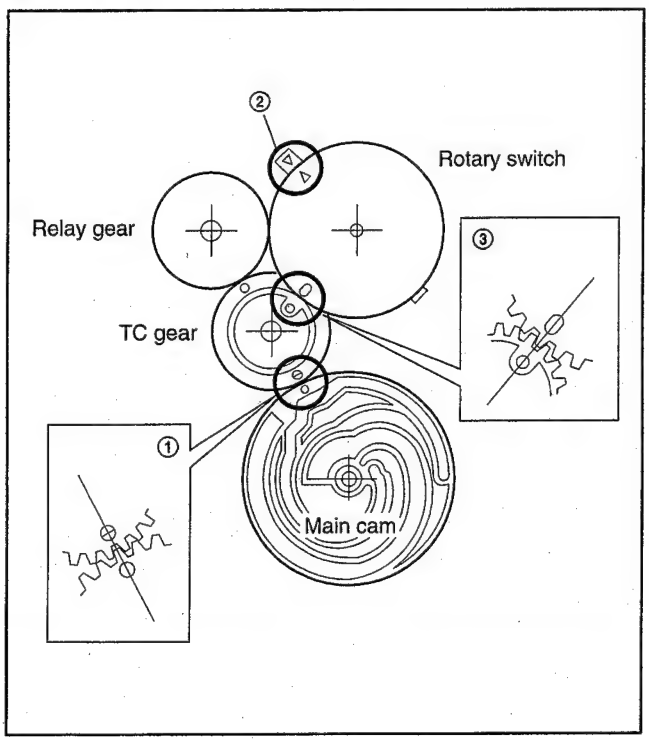
- This section classifies the phase adjustment into three blocks for clarity. The attaching order of each part is not described here. For details of the attaching order, refer to "**5-1-5. MECHANISM SECTION CHECKS AND REPLACEMENTS**".

3-1. PHASE ADJUSTMENT (Loading/Unloading Driving Section)

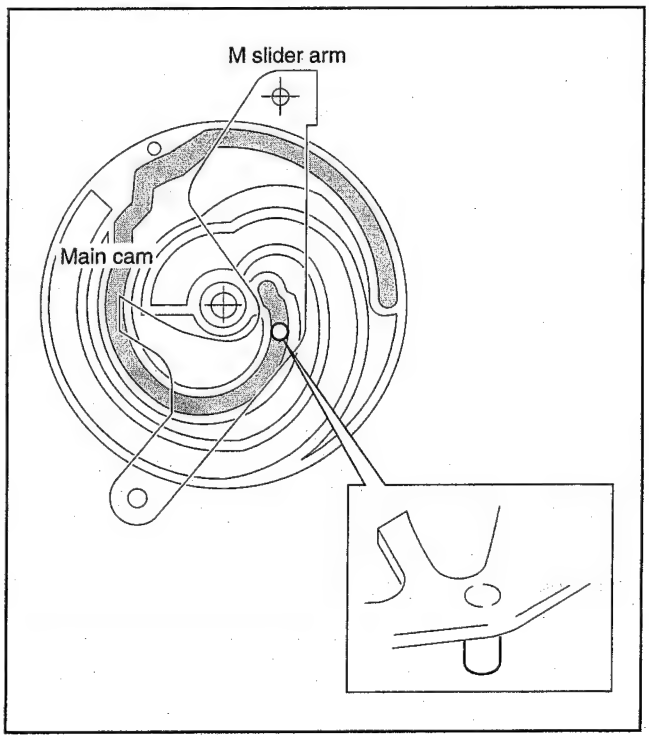
Note 1: Adjust it at the (UNLOADING) position unless otherwise specified.
Note 2: Ⓐ to Ⓖ shown below are the orders for the phase adjustment.



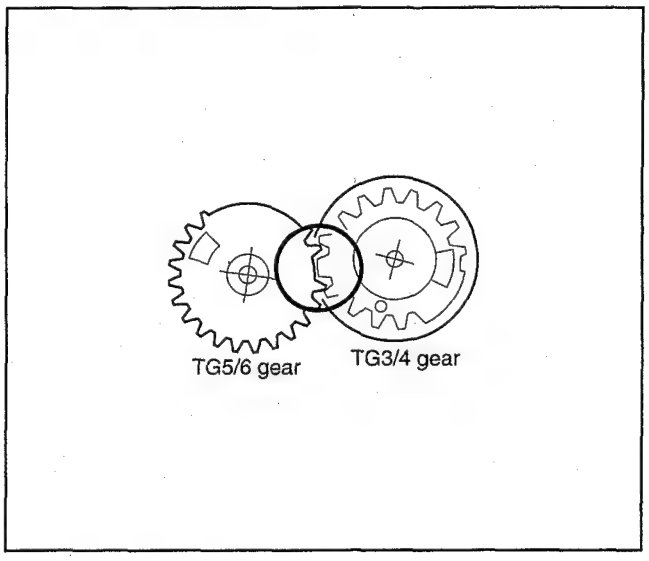
PHASE ADJUSTMENT Ⓐ



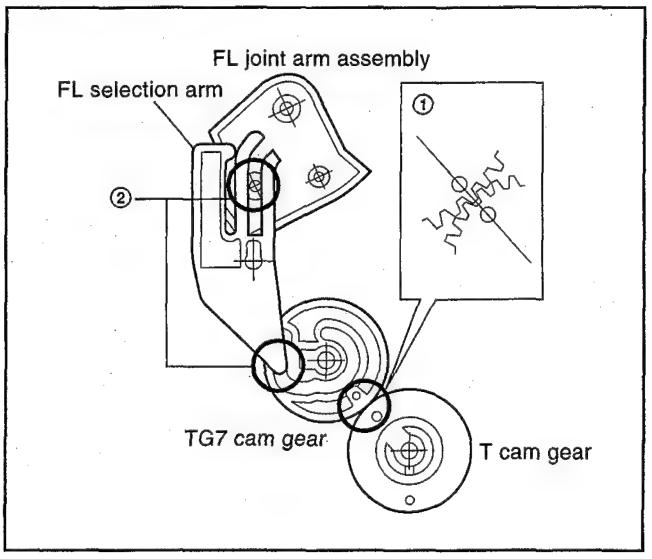
PHASE ADJUSTMENT Ⓑ



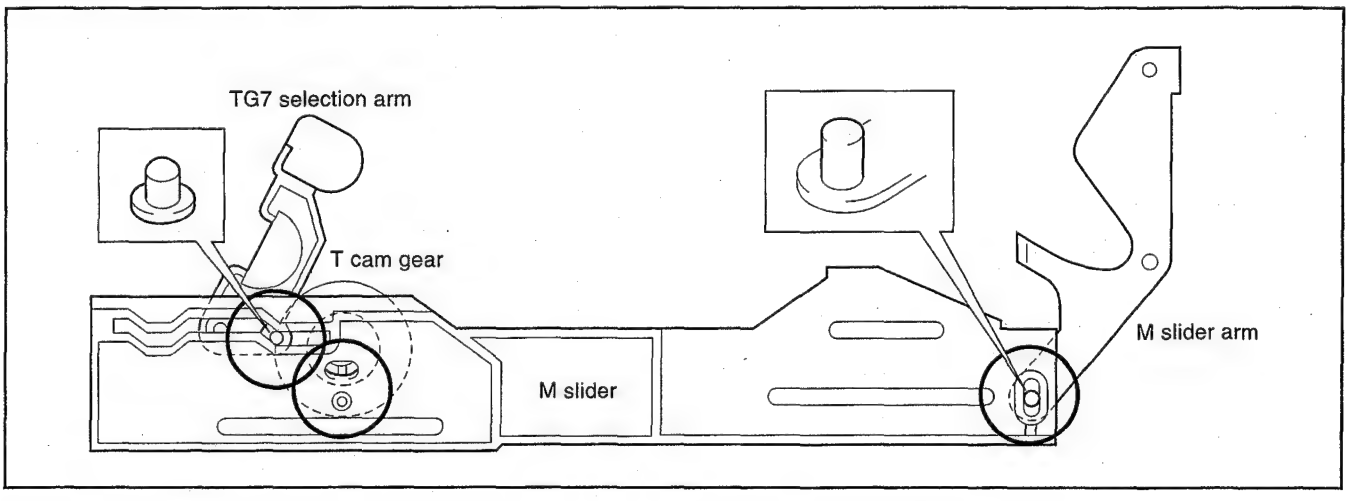
PHASE ADJUSTMENT Ⓒ



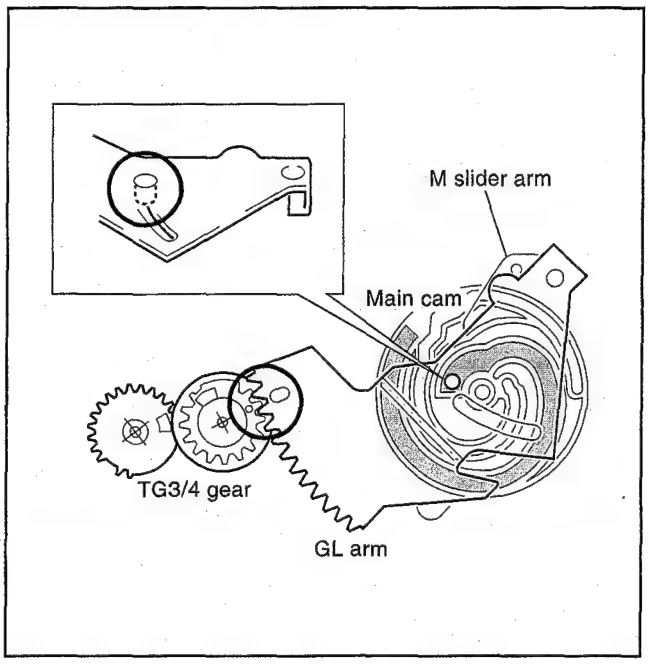
PHASE ADJUSTMENT Ⓓ



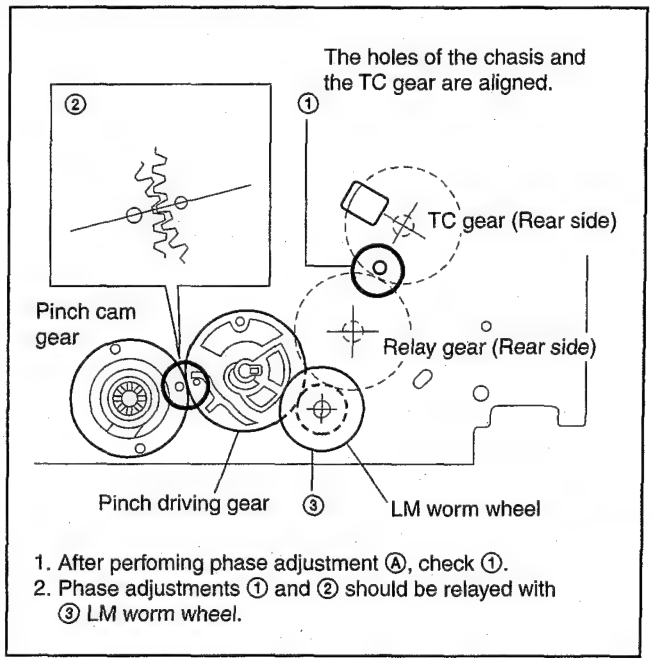
PHASE ADJUSTMENT Ⓔ



PHASE ADJUSTMENT Ⓕ



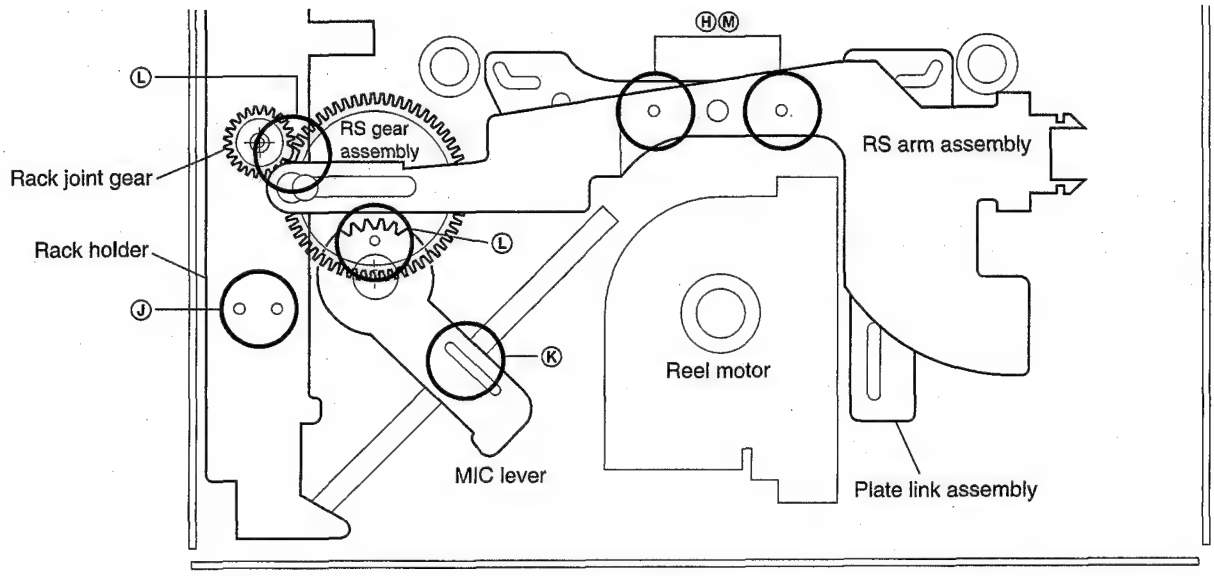
PHASE ADJUSTMENT Ⓖ



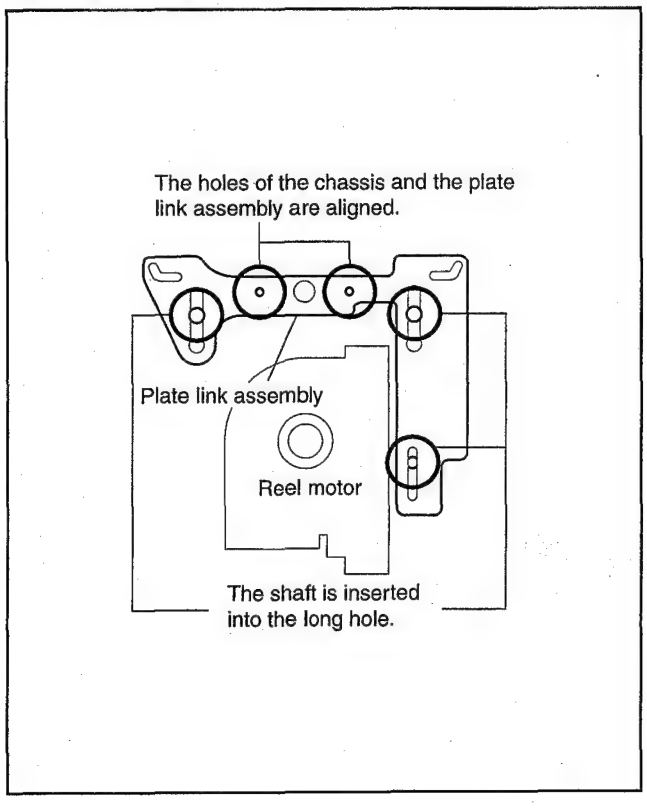
1. After perfoming phase adjustment Ⓐ, check ①.
2. Phase adjustments ① and ② should be relayed with ③ LM worm wheel.

3-2. PHASE ADJUSTMENT (S/L Cassette Selection Section)

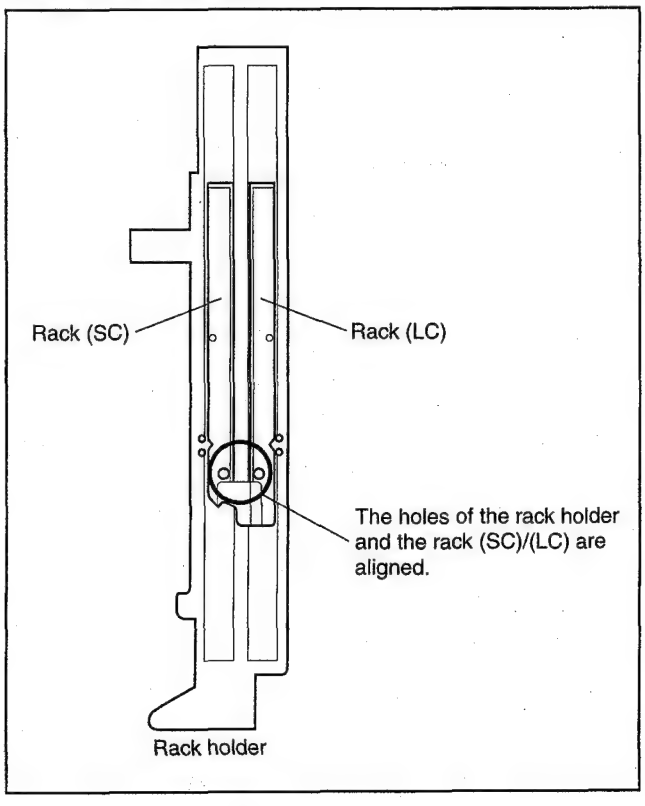
Note 1: Adjust if at the (S/L cassette) position unless otherwise specified.
Note 2: Ⓗ to Ⓜ shown below are the orders for the phase adjustment.



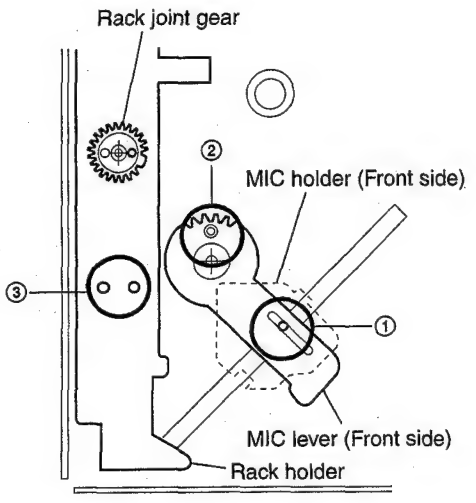
PHASE ADJUSTMENT Ⓗ



PHASE ADJUSTMENT Ⓙ

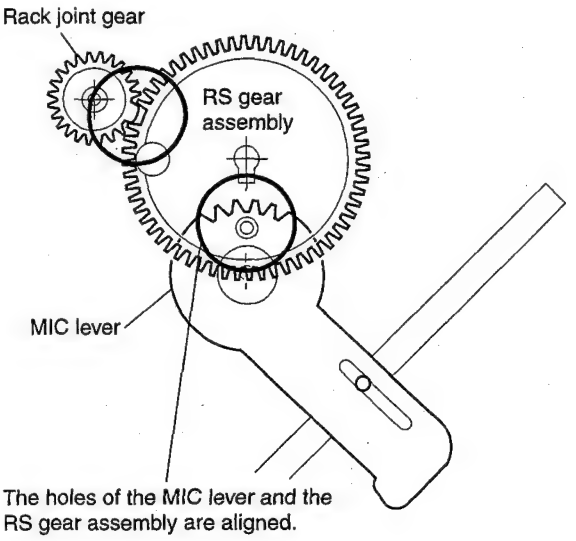


PHASE ADJUSTMENT Ⓚ

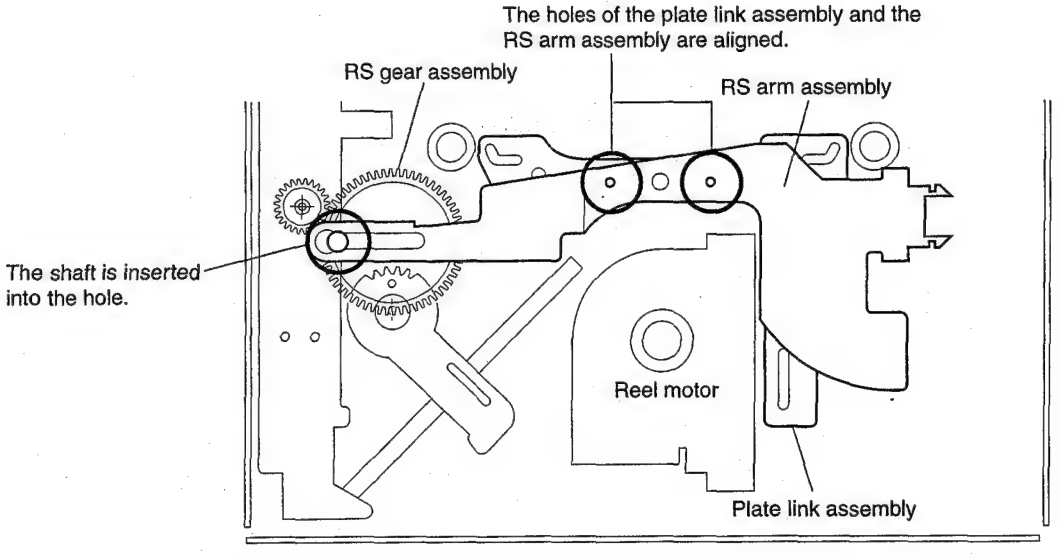


Note: ② should be aligned with the hole of the chassis.
: ③ should be aligned with the hole of the rack (SC)/(LC).

PHASE ADJUSTMENT Ⓛ



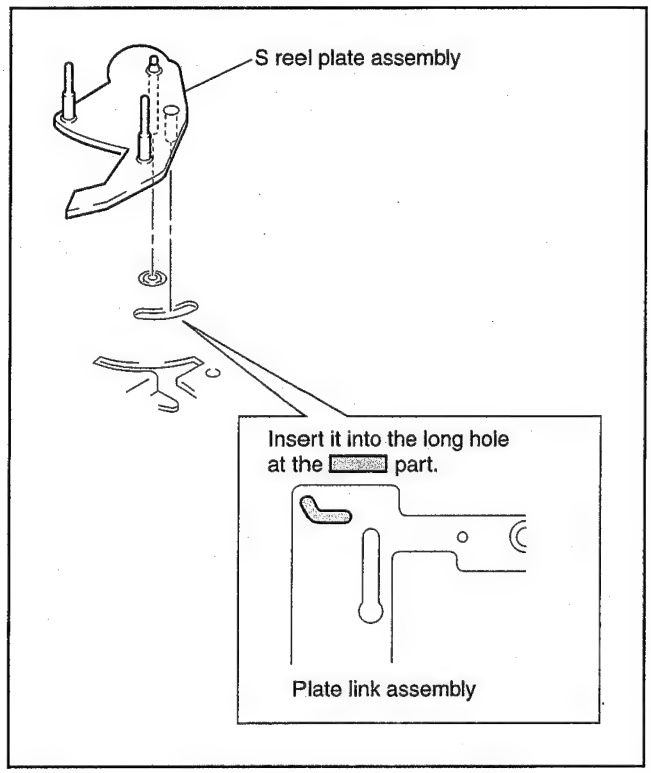
PHASE ADJUSTMENT Ⓜ



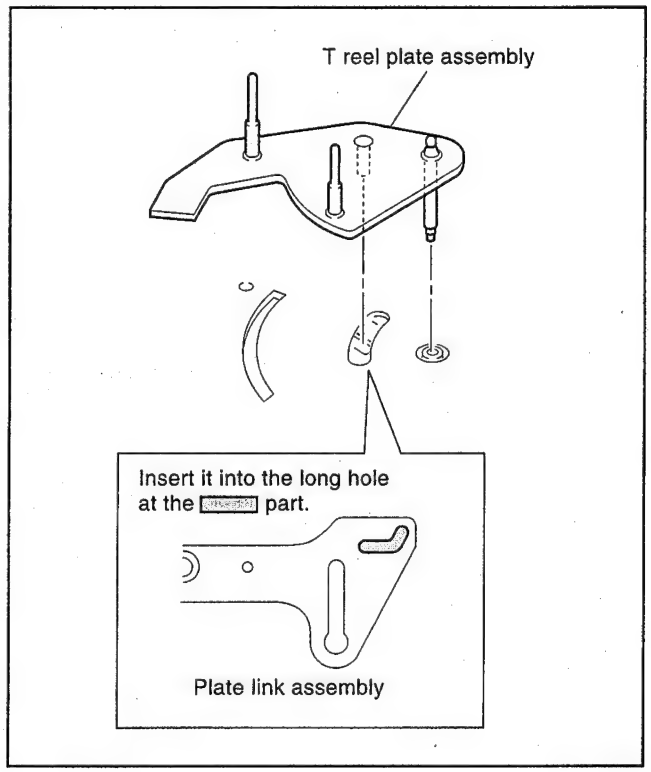
3-3. PHASE ADJUSTMENT (Mechanism Chassis Upper Surface Parts)

Note: Adjust if at the (UNLOADING) position unless otherwise specified.

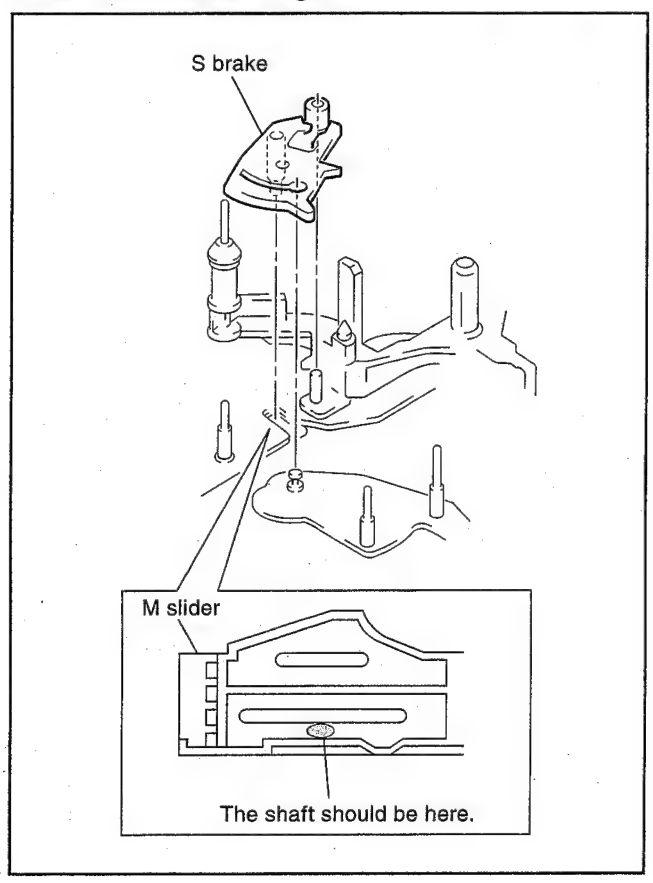
PHASE ADJUSTMENT Ⓝ



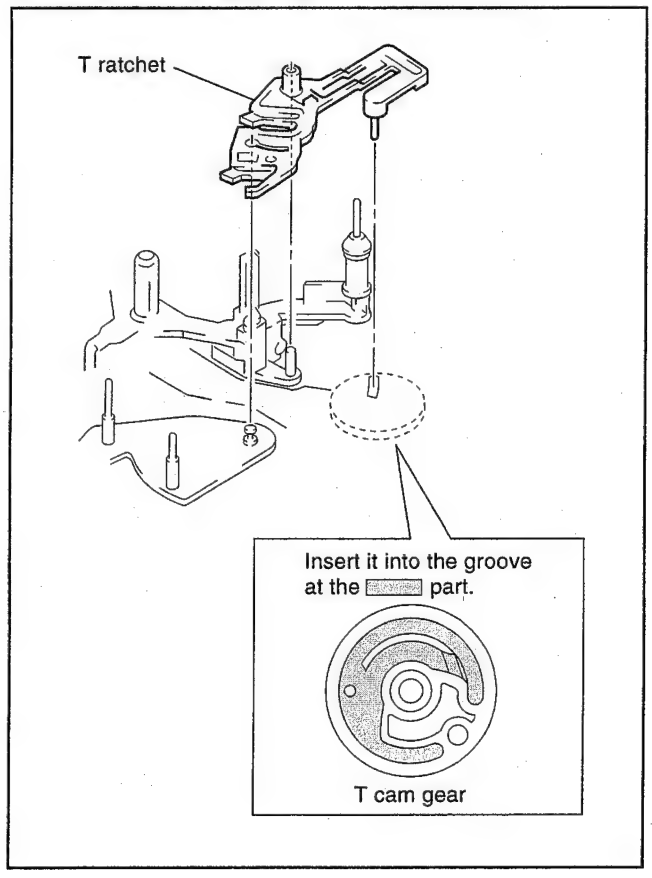
PHASE ADJUSTMENT Ⓟ



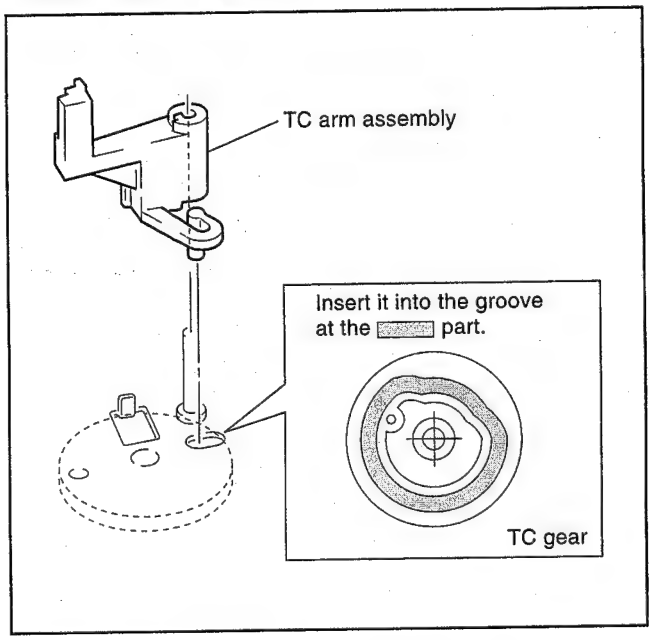
PHASE ADJUSTMENT Ⓠ



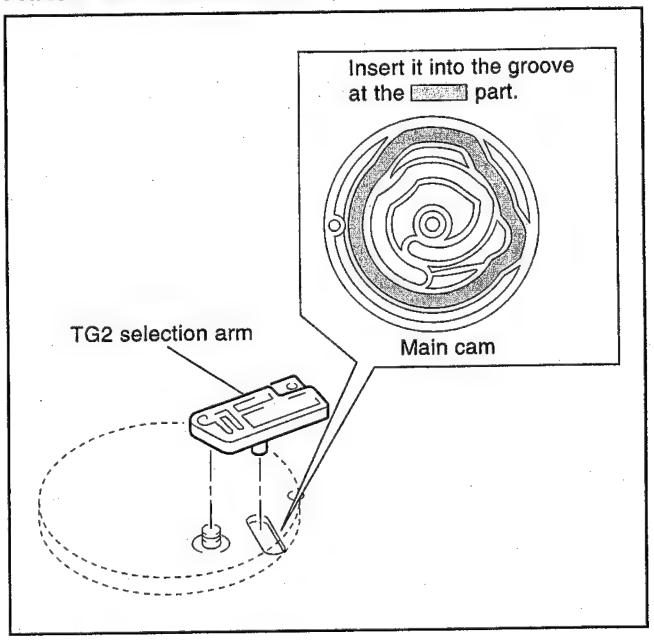
PHASE ADJUSTMENT Ⓡ



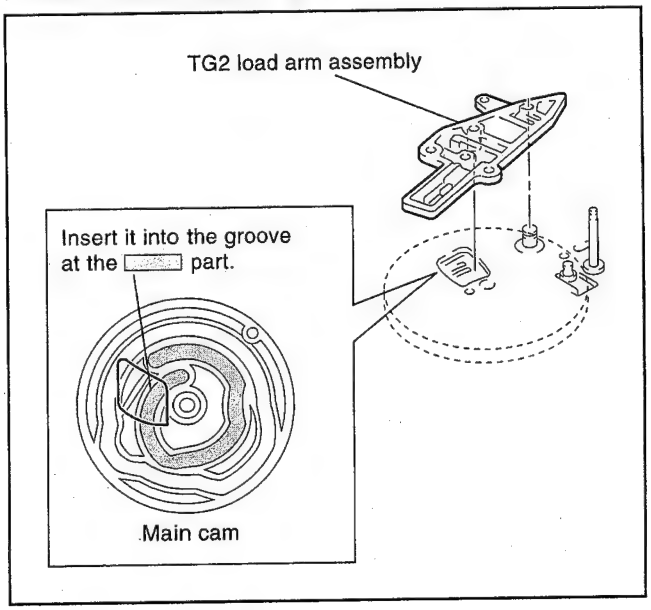
PHASE ADJUSTMENT Ⓢ



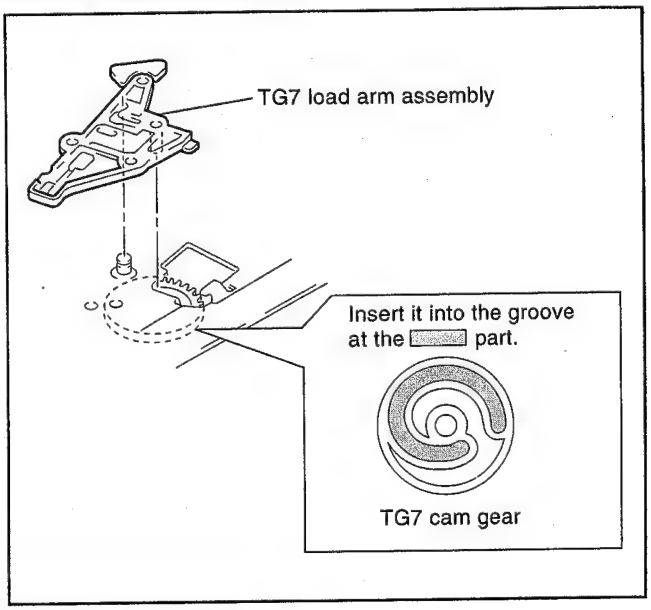
PHASE ADJUSTMENT Ⓣ



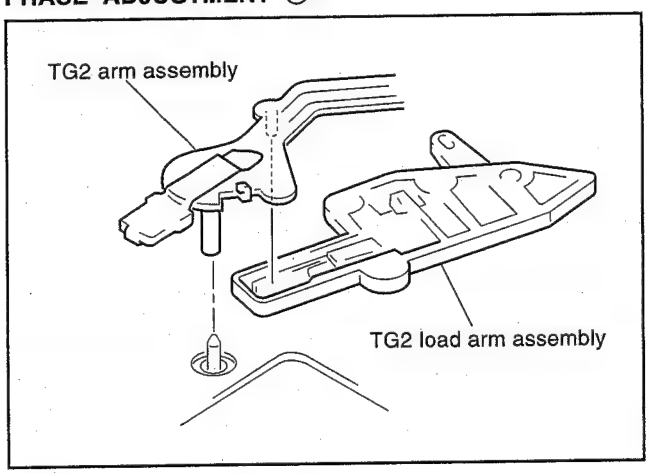
PHASE ADJUSTMENT Ⓤ



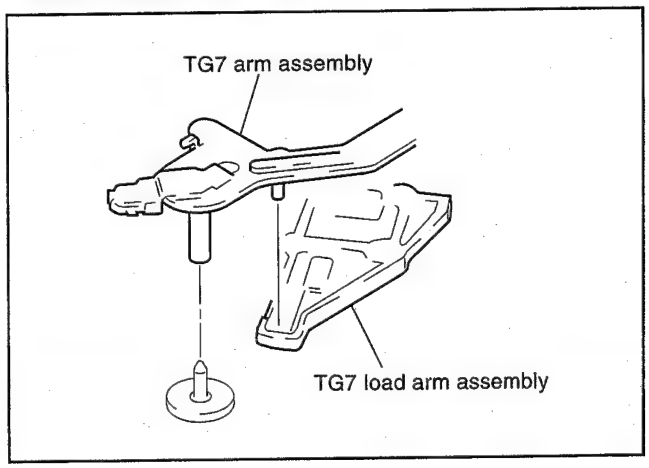
PHASE ADJUSTMENT Ⓥ



PHASE ADJUSTMENT Ⓦ



PHASE ADJUSTMENT Ⓧ



5-1-4. PERIODIC CHECK AND MAINTENANCE

- Carry out the following maintenance and periodic checks not only to fully display the functions and performance of the set, but also for the equipment and tape. After repairing, service the set as follows, regardless of the length of use.

4-1. CLEANING OF ROTARY DRUM ASSEMBLY

1) Press a wiping cloth (Ref No. J-2) moistened with cleaning fluid (Ref No. J-1) against the rotary drum assembly gently, and clean it while rotating the upper rotary drum assembly slowly with your finger in the counterclockwise direction.

Note: Do not rotate the motor on power or rotate the upper rotary drum assembly in the clockwise direction with your finger. The head tip will also be damaged if the wiping cloth is moved perpendicularly against it.
Therefore, be sure to follow the above instructions when cleaning the rotary drum assembly.

4-2. CLEANING OF TAPE PATH SYSTEM (See Fig. 1.)

1) In the EJECT mode, clean the tape path systems (TG-1, 2, 3, 4, 5, 6, 7, 8, capstan) and the lower drum using a superfine applicator (Ref No. J-3) moistened with cleaning fluid.

Note 1: Make sure that no oil or grease of the link mechanisms sticks to the superfine applicator. (Ref No. J-3)

Note 2: Do not use a applicator moistened with alcohol to the other guide cleaning. But clean the pinch roller using alcohol.

Note: When cleaning the tape path system, be sure to set it to the (LOADING) position. (Refer to page 5-3)

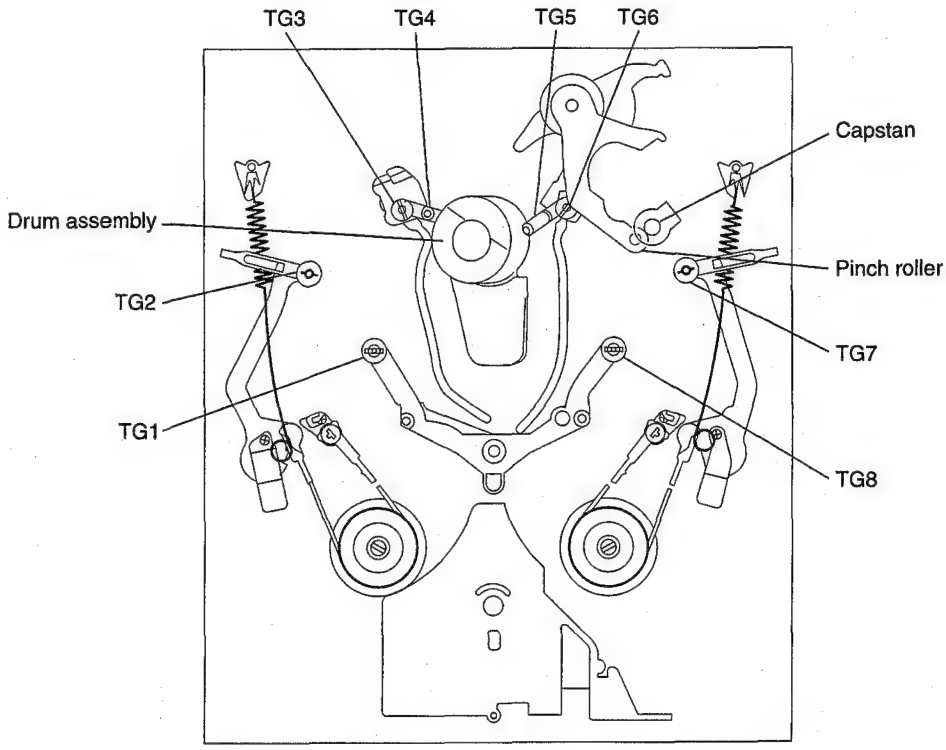


Fig. 1.

4-3. PERIODIC CHECKS

Location of Maintenance and Check		Hours of Use (H)										Remarks
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000	
	Cleaning of tape path surface	○	○	○	○	○	○	○	○	○	○	Take care not to adhere the oil.
	Cleaning and degaussing of rotary drum assembly	○	○	○	○	○	○	○	○	○	○	
Driving System	Capstan shaft (Bearing)	–	☆	–	☆	–	☆	–	☆	–	☆	Make sure that no oil gets on the tape path surface.
	Loading motor	–	☆	–	☆	–	☆	–	☆	–	☆	A-7026-007-A
Performance Confirmation	Abnormal noise	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Back tension measurement	–	☆	–	☆	–	☆	–	☆	–	☆	
	Brake system	–	☆	–	☆	–	☆	–	☆	–	☆	
	FWD / RVS Torque measurement	–	☆	–	☆	–	☆	–	☆	–	☆	

○: Cleaning ☆: Confirmation

Note: When overhauling, refer to the checks above and replace parts.

Note: Grease

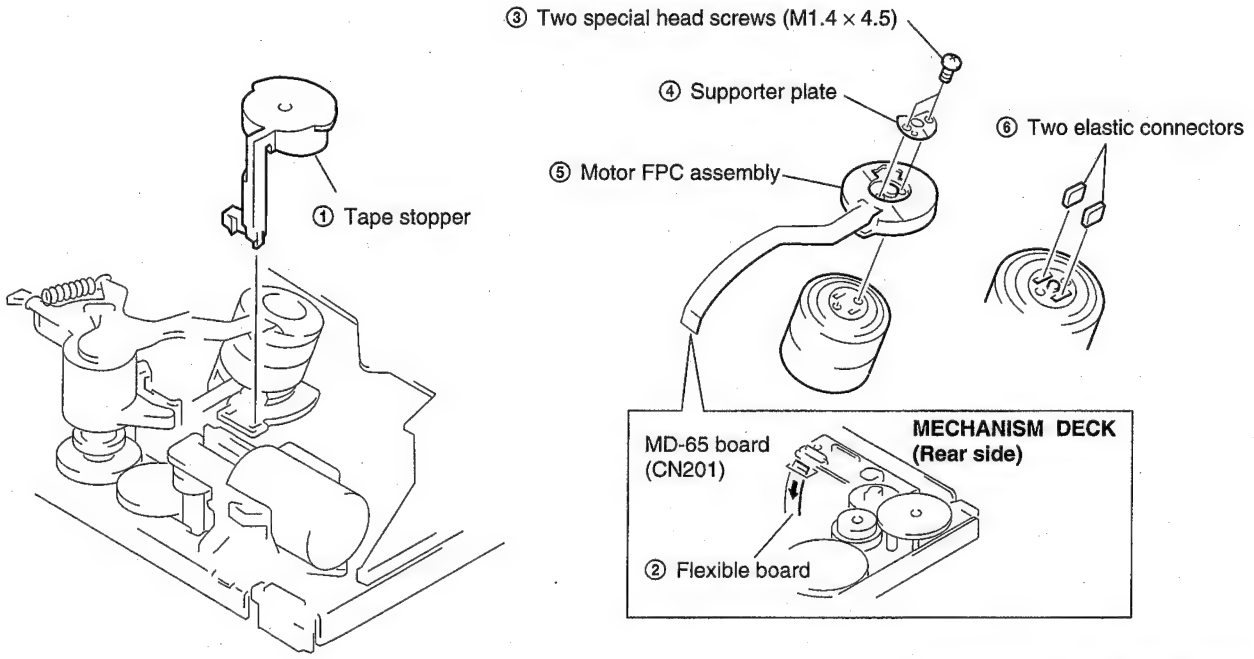
- Be sure to use the specified the grease. (The SG-055G is used all in the E mechanism)
  Check the quantity of grease when installing the parts which is needed to apply the grease.
- FLOIL (SG-055G): Part No. 7-651-000-09

5-1-5. MECHANISM SECTION CHECKS AND REPLACEMENTS

5-1. TAPE STOPPER, MOTOR FPC ASSEMBLY AND ELASTIC CONNECTOR

• Removing/Attaching

- Removing: ① → ② → ③ → ④ → ⑤ → ⑥
- Attaching : ⑥ → ⑤ → ④ → ③ → ② → ① → Adjust them according to the flowchart (START-3) on page 5-43.

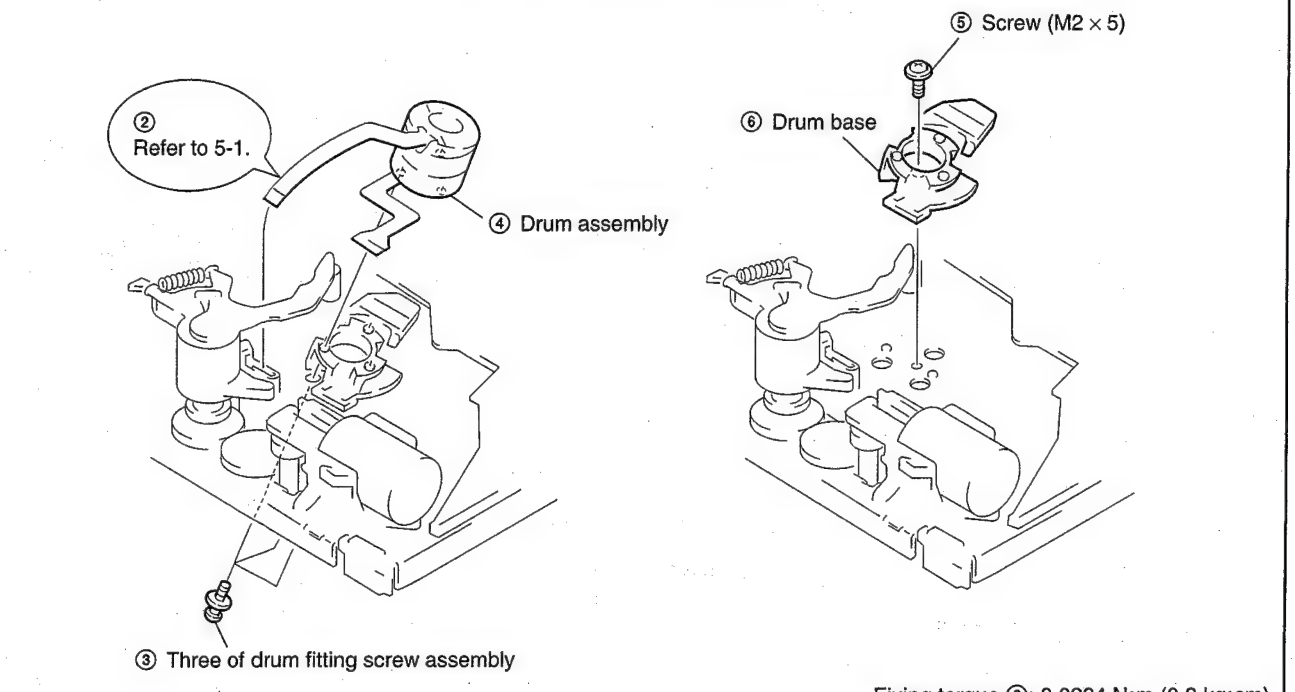


Fixing torque: 0.0490 N•m (0.5 kg•cm)

5-2. DRUM ASSEMBLY AND DRUM BASE

• Removing/Attaching

- Removing: ① Tape stopper (Refer to 5-1.) → ② → ③ → ④ → ⑤ → ⑥
- Attaching : ⑥ → ⑤ → ④ → ③ → ② → ① → Adjust them according to the flowchart (START-3) on page 5-43.



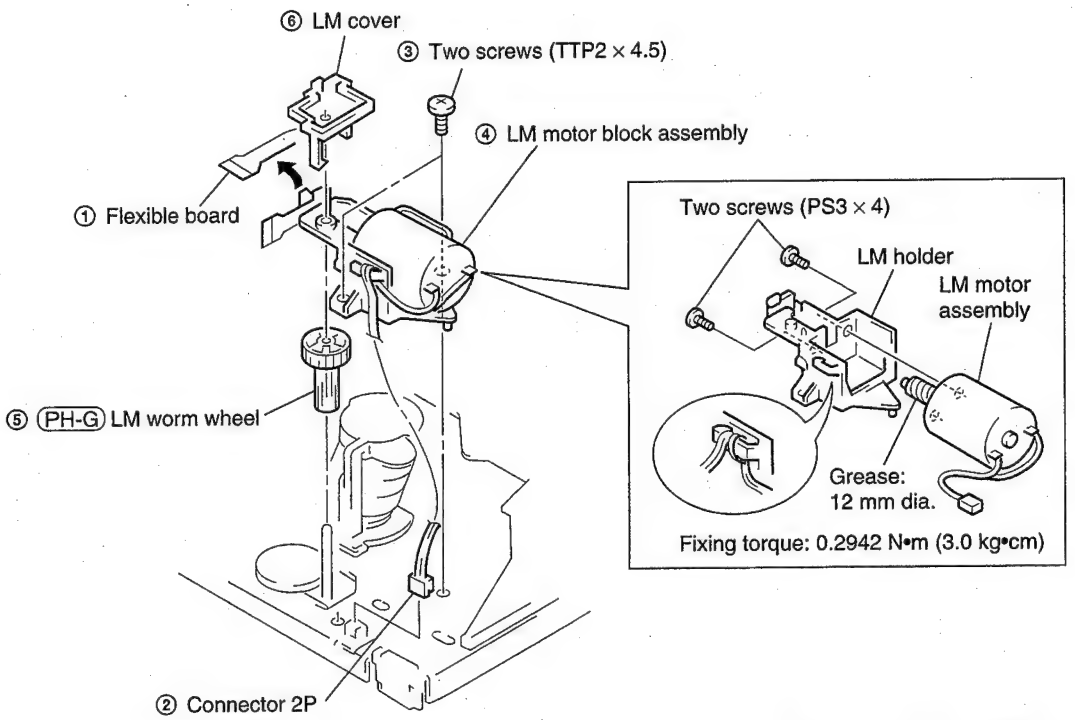
Fixing torque ③: 0.0294 N•m (0.3 kg•cm)
⑤: 0.0686 N•m (0.7 kg•cm)

(PH-G) : Page 5-7
(PH-S) : Page 5-11

5-3. LM COVER, LM WORM WHEEL, LM HOLDER AND LM MOTOR ASSEMBLY

• **Removing/Attaching**

- Removing: ① → ② → ③ → ④ → ⑤ → ⑥
- Attaching : ⑥ → ⑤ → ④ → ③ → ② → ①

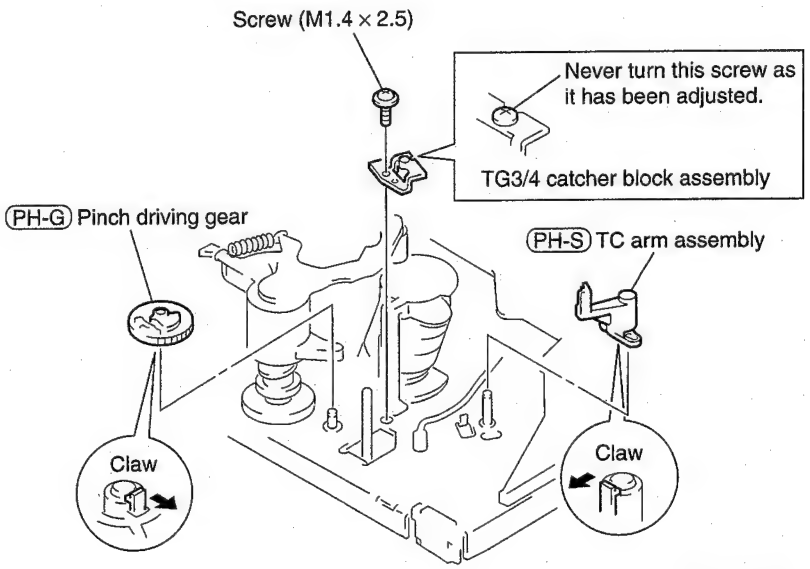


Fixing torque ③: 0.1961 N•m (2.0 kg•cm)

5-4. TG3/4 CATCHER BLOCK ASSEMBLY, PINCH DRIVING GEAR AND TC ARM ASSEMBLY

• **Removing/Attaching**

- Removing: After removing the LM motor assembly (Refer to 5-3.), remove each part.
- Attaching : After attaching each part and the LM motor block assembly, adjust them according to the flowchart (START-3) on page 5-43. (Only when the TG3/4 catcher block assembly is removed)



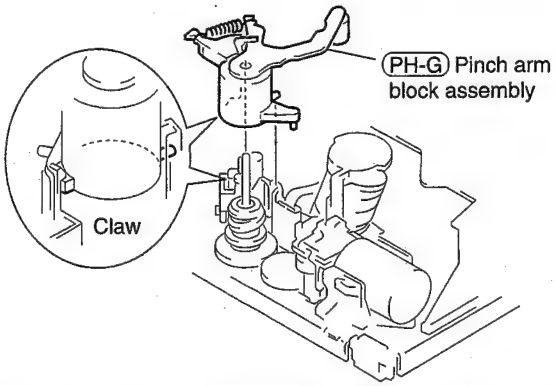
Fixing torque: 0.0686 N•m (0.7 kg•cm)

5-5. PINCH ARM ASSEMBLY, PINCH LIMITER AND TENSION COIL SPRING (PINCH)

1. Removing

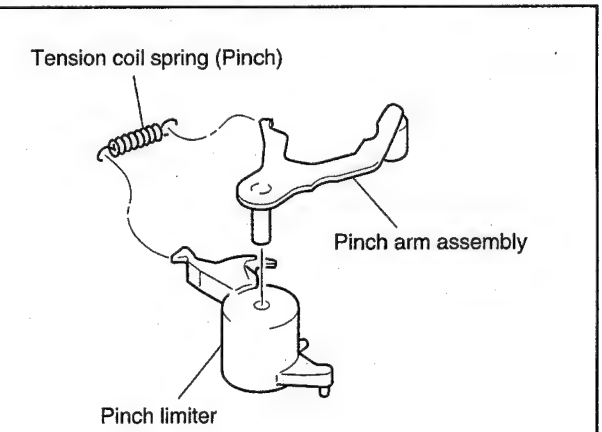
①. Set the (UNLOADING) position. (Refer to page 5-3)

②. Pinch arm block assembly.



Note: After check the phase adjustment (PH-G), attach the pinch arm block assembly.

③. Pinch arm assembly and pinch limiter.



2. Attaching

❶. Attach the parts in the order of ① → ③ → ②.

❷. Adjust them according to the flowchart (START-3) on page 5-43.

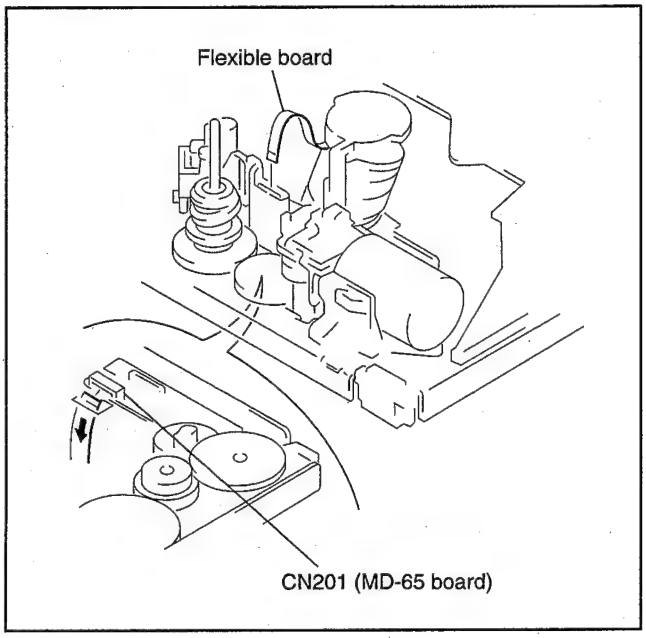
5-6. HC ARM, HC ROLLER ASSEMBLY, PINCH RETAINER, PINCH CAM GEAR AND TG5/6 CATCHER BLOCK ASSEMBLY

1. Removing

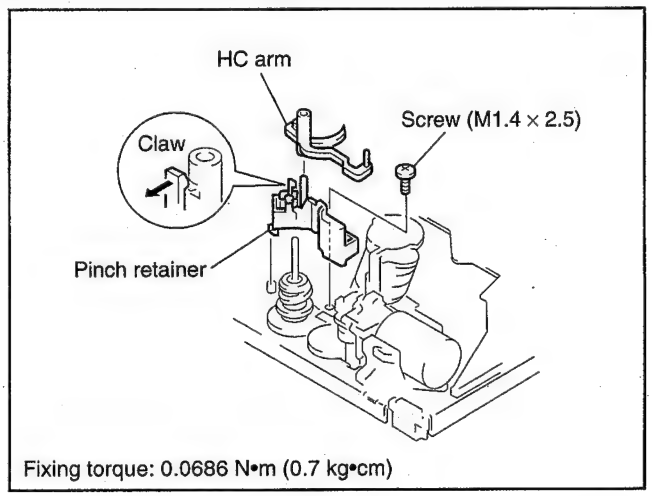
①. Set the (UNLOADING) position. (Refer to page 5-3)

②. Pinch arm block assembly. (Refer to 5-5)

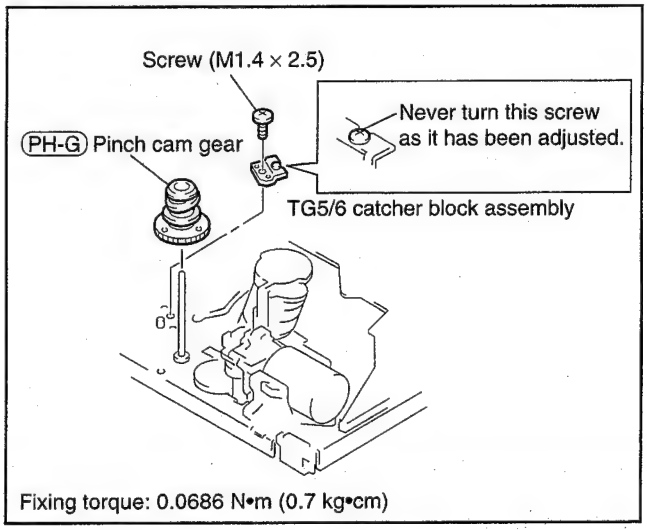
③. Flexible board.



④. HC arm, HC roller assembly and pinch retainer.



⑤. Pinch cam gear and TG5/6 catcher block assembly.



2. Attaching

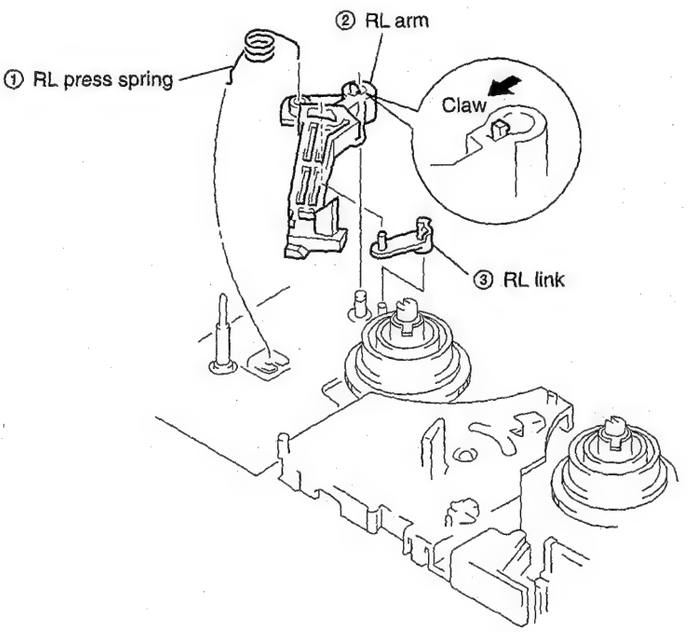
❶. Attach the parts in the order of ① → ⑤ → ④ → ③ → ②.

❷. Adjust them according to the flowchart (START-3) on page 5-43.

5-7. RL ARM AND RL LINK

• **Removing/Attaching** (**L cassette** position. (Refer to page 5-2))

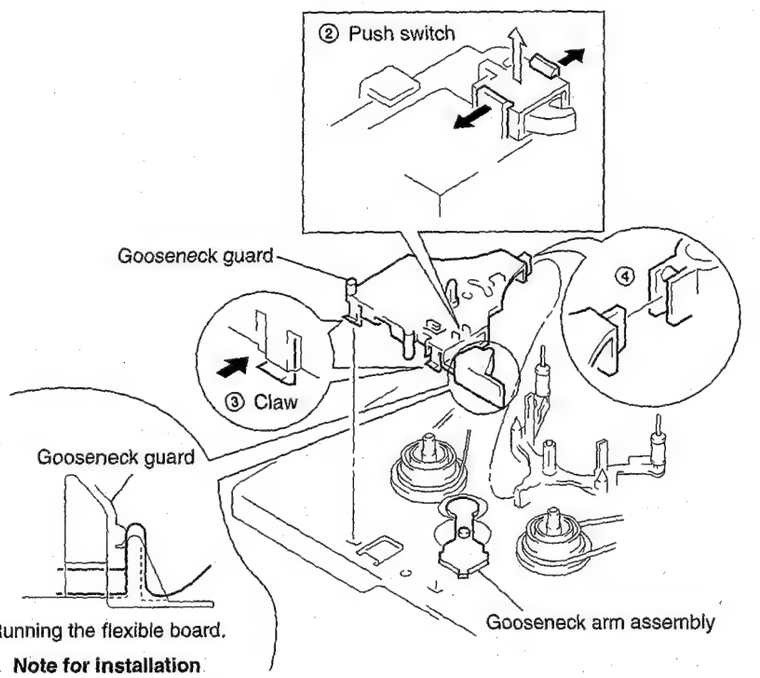
• Removing: ① → ② → ③
• Attaching : ③ → ② → ①

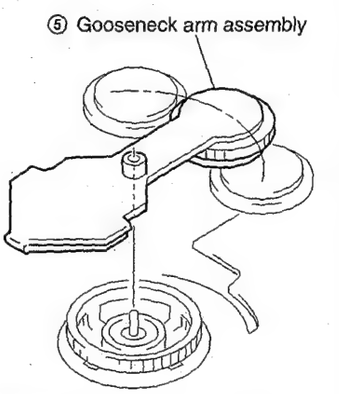


5-8. GOOSENECK GUARD AND GOOSENECK ARM ASSEMBLY

• **Removing/Attaching** (**L cassette** position. (Refer to page 5-2))

• Removing: ① Remove the RL arm. (Refer to 4-7) → ② → ③ → ④ → ⑤
• Attaching : ⑤ → ④ → ③ → ② → ①





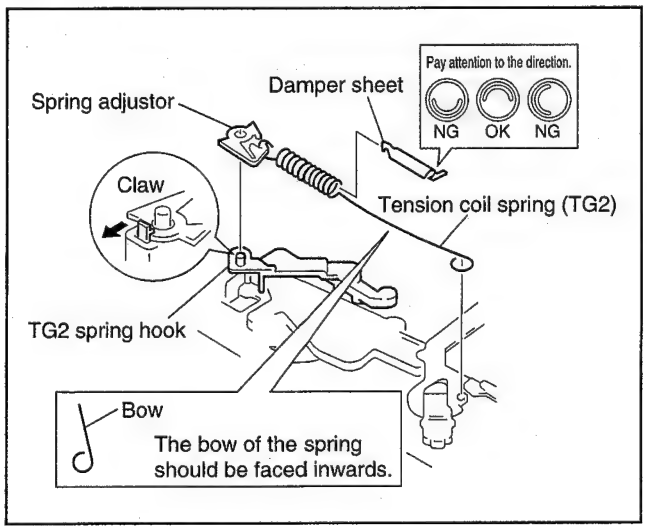
Note: When attaching, slide it in the right or left direction.

5-9. TENSION COIL SPRING (TG2), SPRING ADJUSTOR, TG2 SPRING HOOK, TG2 SELECTION ARM AND DAMPER SHEET

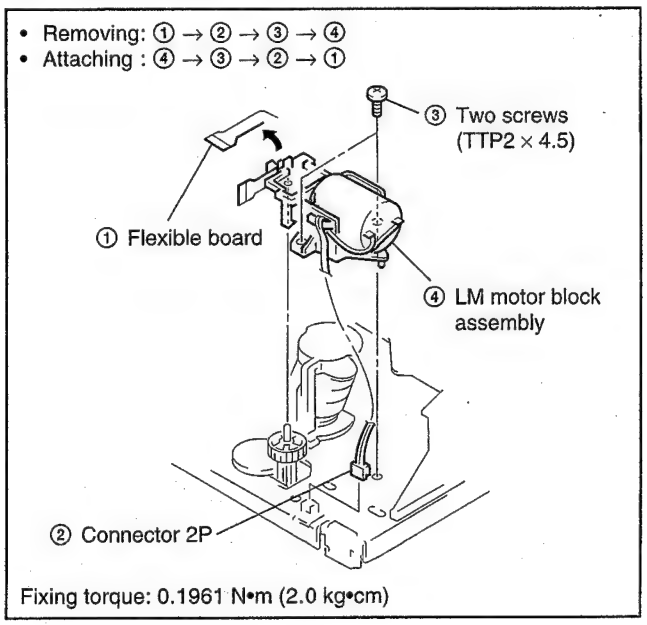
1. Removing

①. Set the (UNLOADING) position. (Refer to page 5-3)

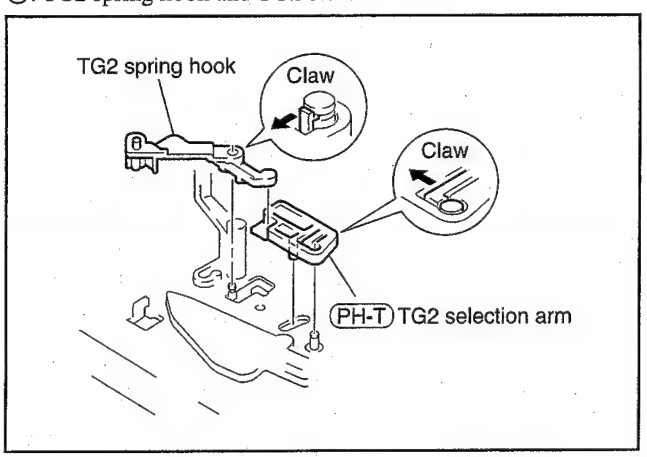
②. Tension coil spring (TG2) and spring adjustor.



③. LM motor block assembly.



④. TG2 spring hook and TG2 selection arm.



2. Attaching

❶. Attach the parts in the order of ① → ④ → ② → ③.

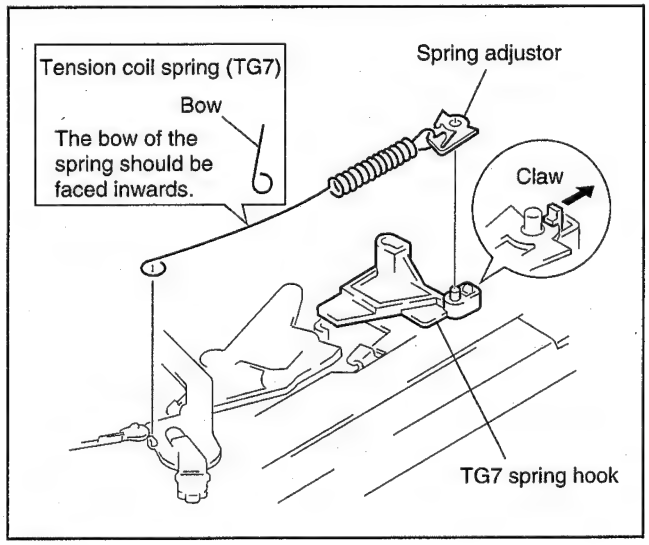
❷. Adjust them according to the flowchart (START-2) on page 5-43.

5-10. TENSION COIL SPRING (TG7), SPRING ADJUSTOR AND TG7 SPRING HOOK

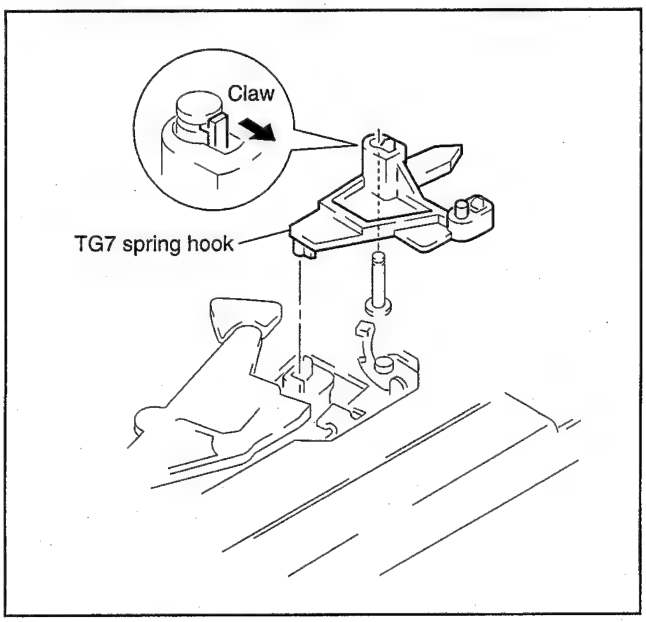
1. Removing

①. Set the (UNLOADING) position. (Refer to page 5-3)

②. Tension coil spring (TG7) and spring adjustor.



③. TG7 spring hook.



2. Attaching

❶. Attach the parts in the order of ① → ③ → ②.

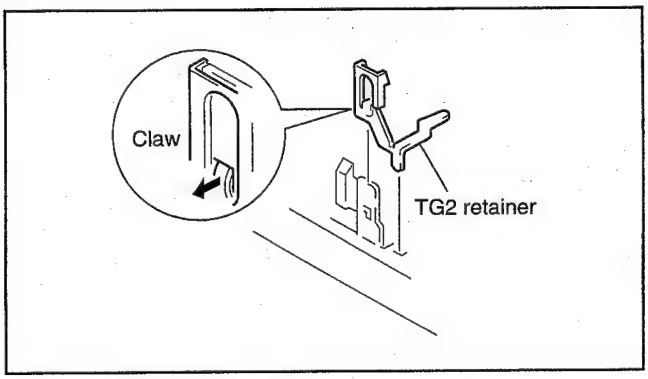
❷. Adjust them according to the flowchart (START-2) on page 5-43.

5-11. TG2 RETAINER, TG2 ARM ASSEMBLY (TG2 PLATE SPRING AND ET MAGNET), S TENSION REGULATOR BAND ASSEMBLY AND TG2 LOAD ARM ASSEMBLY

1. Removing

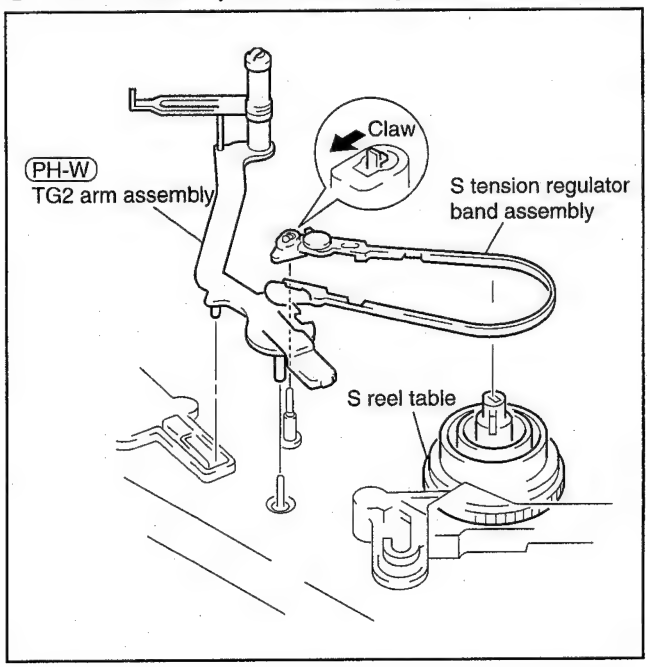
①. Tension coil spring (TG2), spring adjustor, LM motor block assembly and TG2 spring hook. (Refer to 5-9)

②. TG2 retainer.

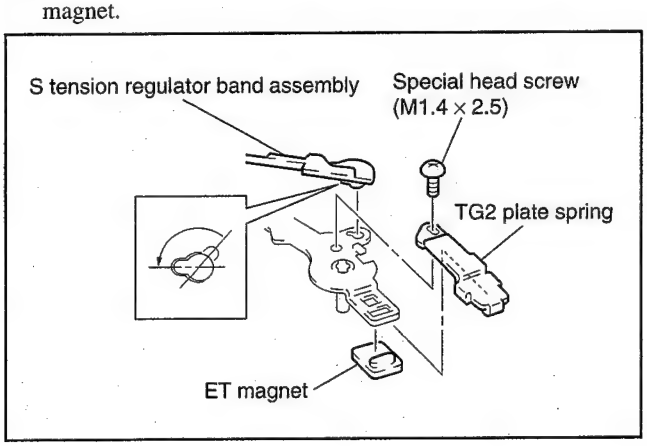


③. Set the (LOADING) position. (Refer to page 5-3)

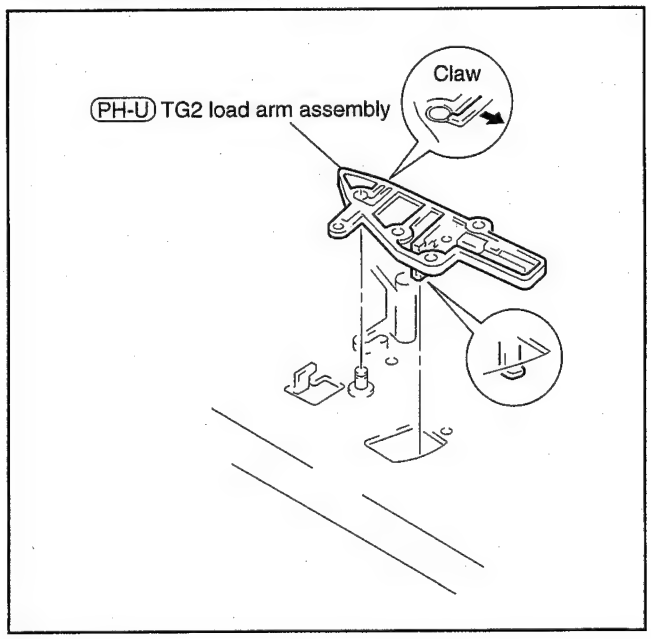
④. TG2 arm assembly and S tension regulator band assembly.



⑤. S tension regulator band assembly, TG2 plate spring and ET magnet.



⑥. TG2 load arm assembly.



2. Attaching

❶. Set the (UNLOADING) position. (Refer to page 5-3)

❷. Attach the parts in the order of ⑥ → ③ → ⑤ → ④ → ② → ①.

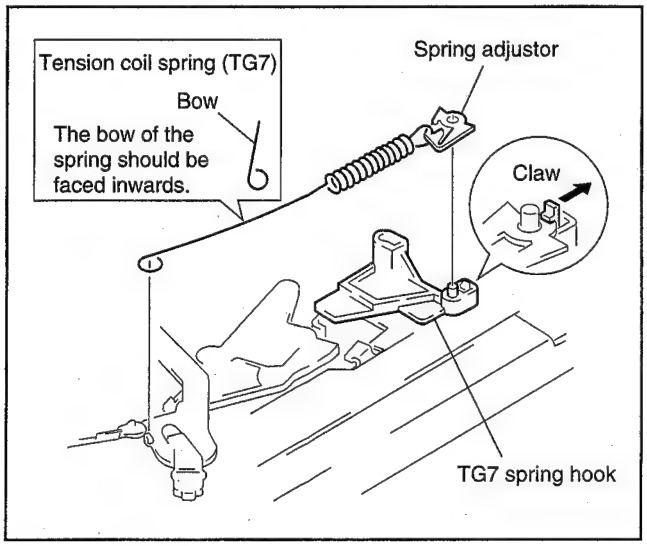
❸. Operation check: (LOADING)/(UNLOADING). (Refer to page 5-3)

❹. Adjust them according to the flowchart (START-2) on page 5-43.

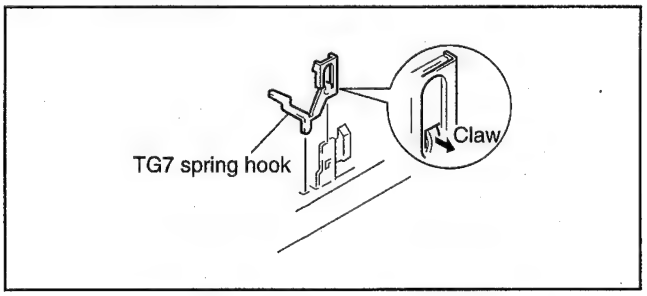
5-12. TG7 RETAINER, TG7 ARM ASSEMBLY (TG7 PLATE SPRING AND ET MAGNET), T TENSION REGULATOR BAND ASSEMBLY AND TG7 LOAD ARM ASSEMBLY

1. Removing

①. Tension coil spring (TG7), spring adjustor.

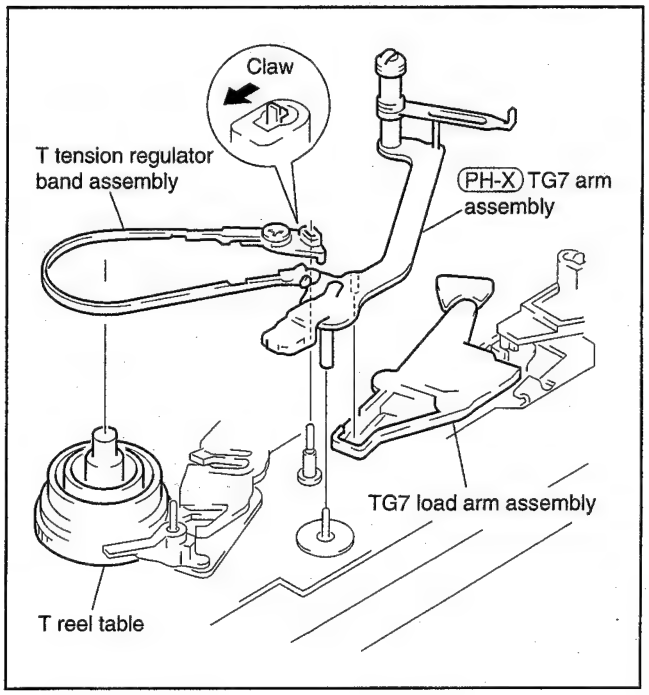


②. TG7 spring hook.

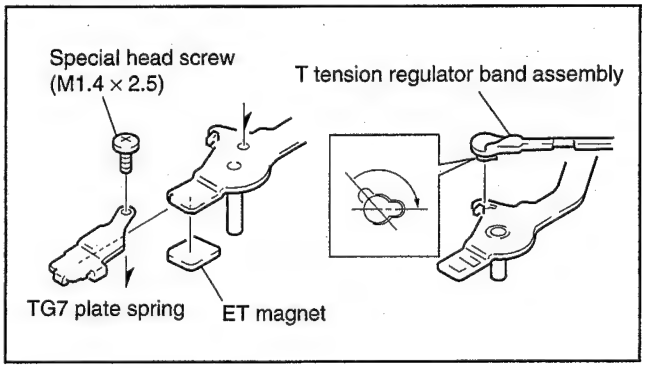


③. Set the (LOADING) position. (Refer to page 5-3)

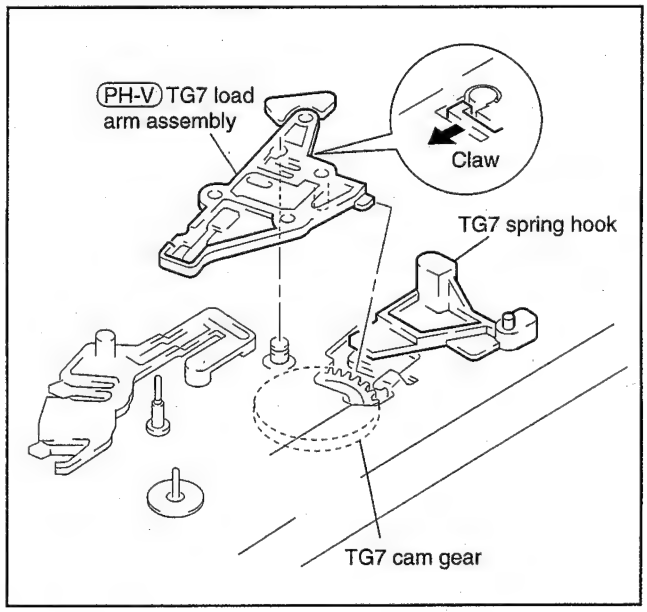
④. TG7 arm assembly and T tension regulator band assembly.



⑤. TG7 plate spring, ET magnet and T tension regulator band assembly.



⑥. TG7 load arm assembly.



2. Attaching

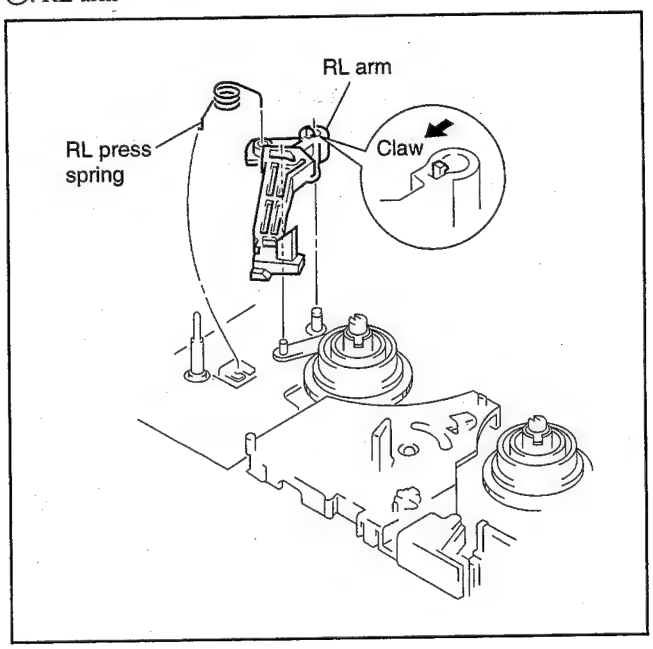
❶. Set the (UNLOADING) position. (Refer to page 5-3)
❷. Attach the parts in the order of ⑥ → ③ → ⑤ → ④ → ② → ①.
❸. Operation check: (LOADING) / (UNLOADING). (Refer to page 5-3.)
❹. Adjust them according to the flowchart (START-2) on page 5-43.

5-13. S REEL TABLE BLOCK ASSEMBLY

1. Removing

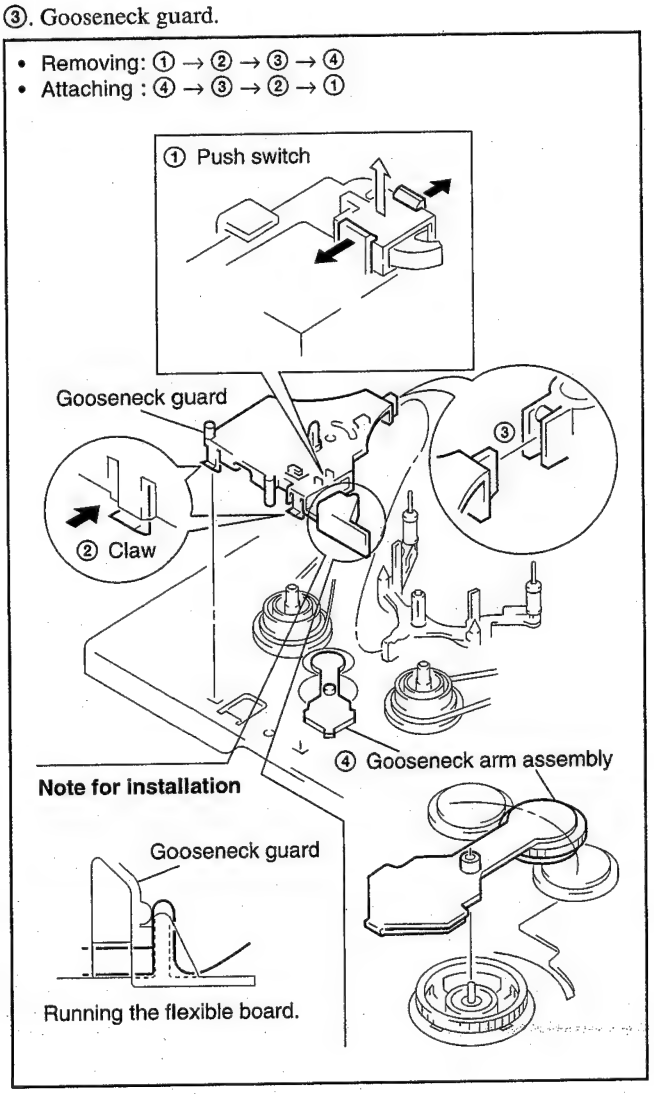
①. Set the (L cassette) position. (Refer to page 5-2)

②. RL arm

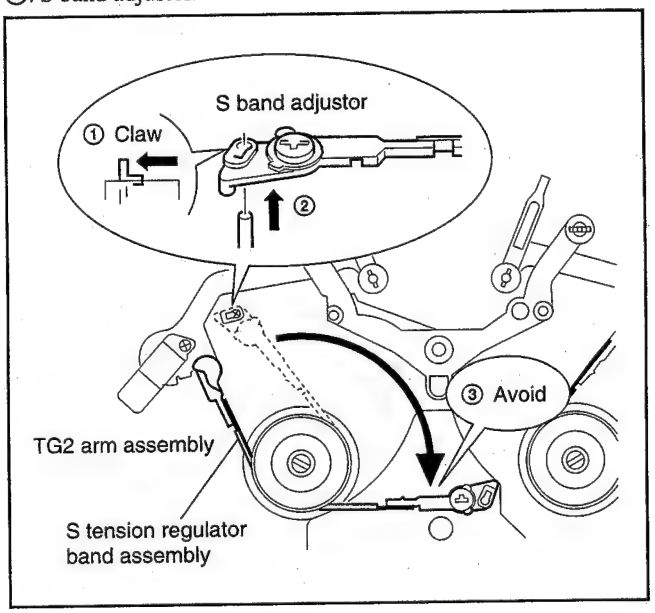


③. Gooseneck guard.

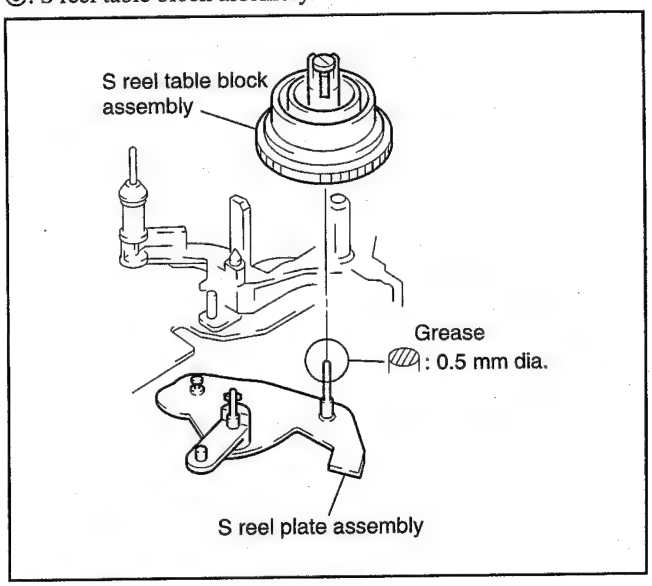
- Removing: ① → ② → ③ → ④
- Attaching : ④ → ③ → ② → ①



④. S band adjustor.



⑤. S reel table block assembly.



2. Attaching

❶. Attach the parts in the order of ① → ⑤ → ④ → ③ → ②.

❷. Adjust them according to the flowchart (START-1) on page 5-43.

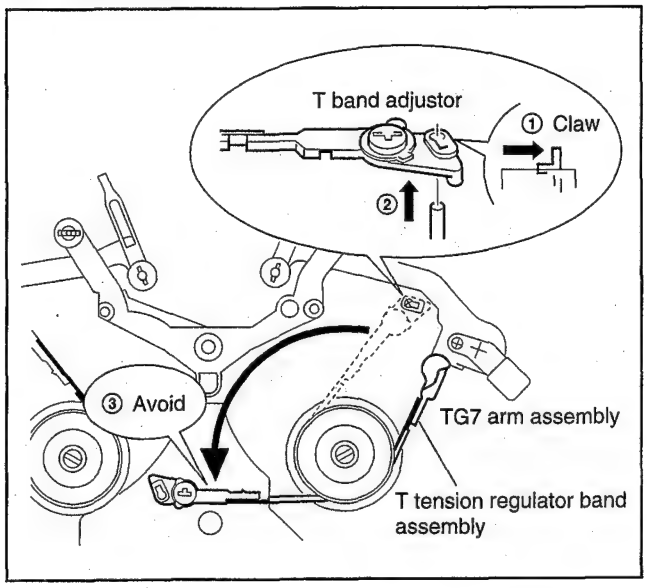
(PH-Q) : Page 5-10

5-14. T REEL HOLDER AND T REEL TABLE BLOCK ASSEMBLY

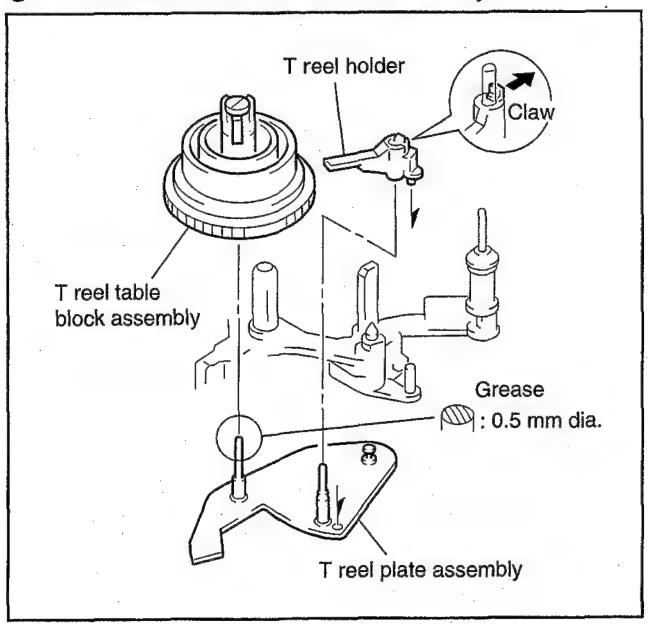
1. Removing

①. Set the (L cassette) position. (Refer to page 5-2)

②. T band adjustor.



③. T reel holder and T reel table block assembly.



2. Attaching

❶. Attach the parts in the order of ① → ③ → ②.

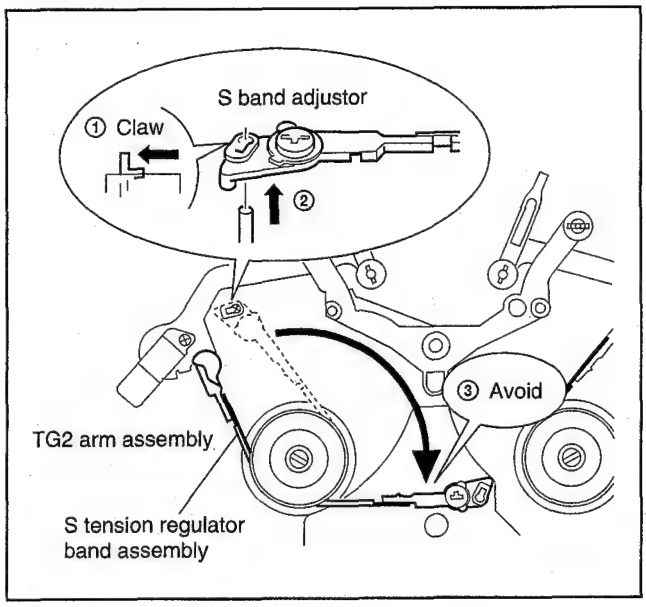
❷. Adjust them according to the flowchart (START-1) on page 5-43.

5-15. S REEL PLATE ASSEMBLY

1. Removing

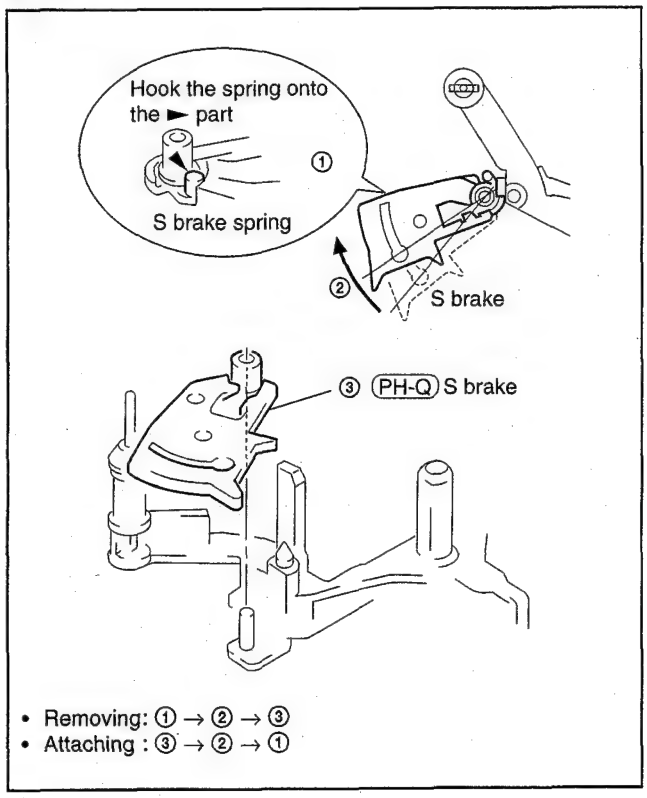
①. Set the (L cassette) position. (Refer to page 5-2)

②. S band adjustor.



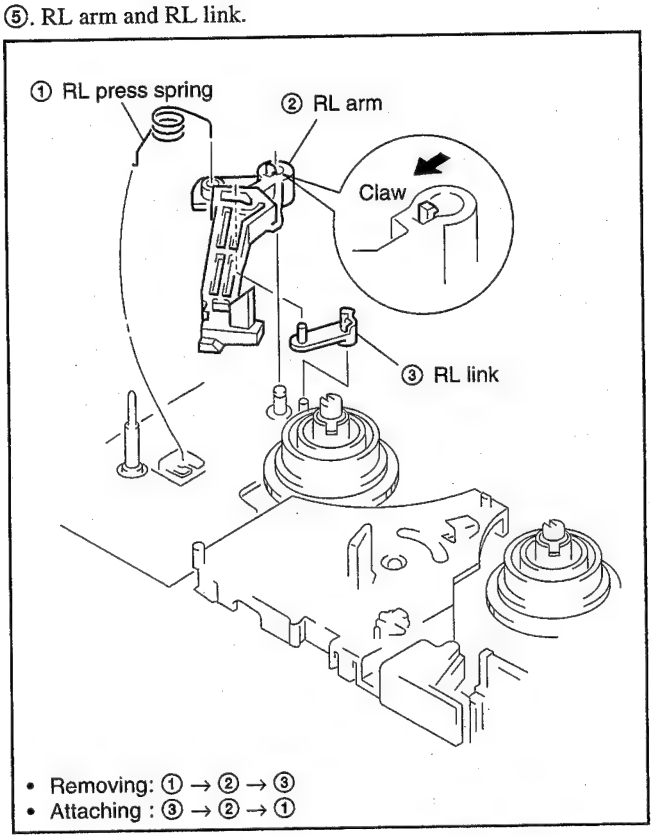
③. Set the (LOADING) position. (Refer to page 5-3)

④. S brake.



- Removing: ① → ② → ③
- Attaching : ③ → ② → ①

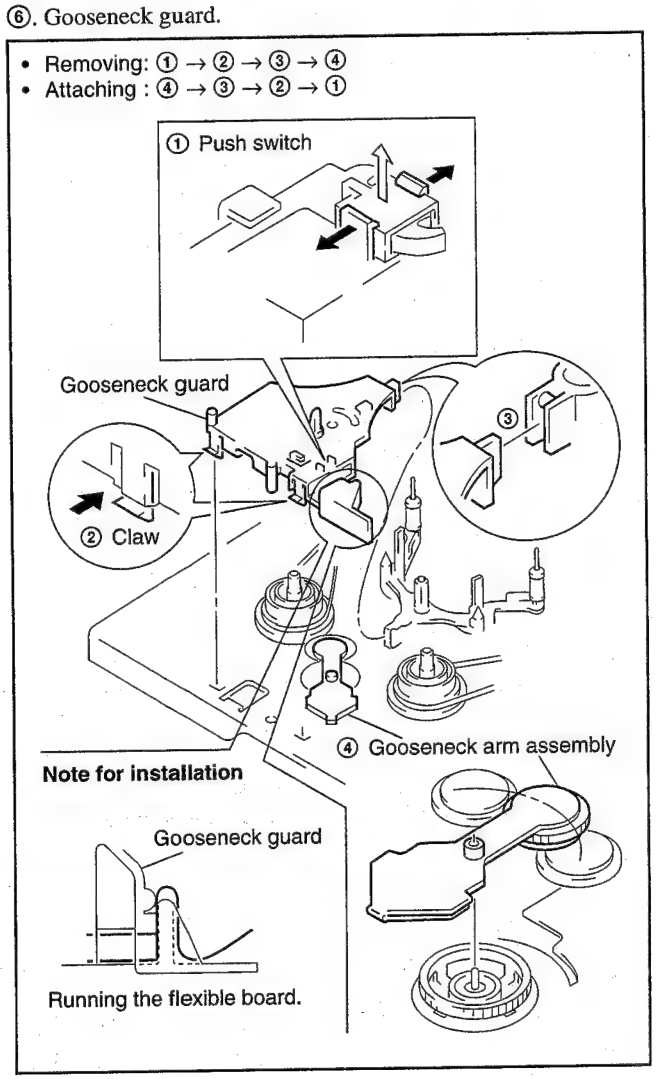
⑤. RL arm and RL link.



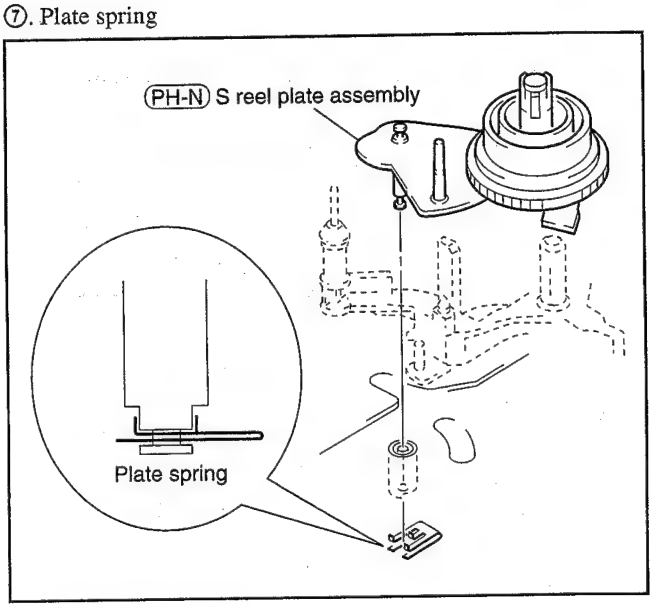
- Removing: ① → ② → ③
- Attaching : ③ → ② → ①

⑥. Gooseneck guard.

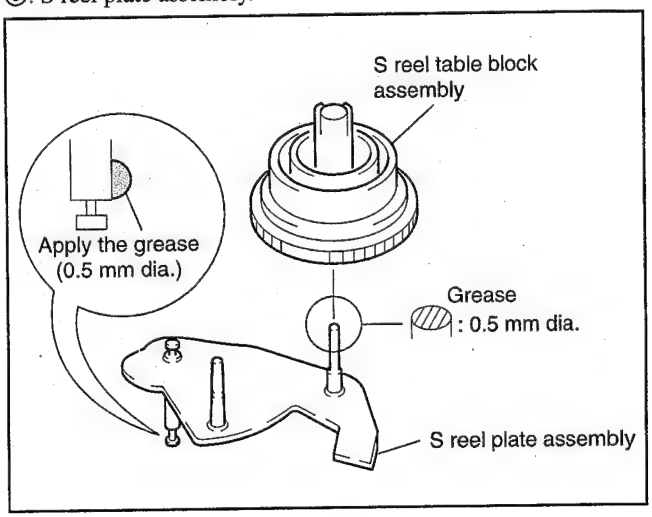
- Removing: ① → ② → ③ → ④
- Attaching : ④ → ③ → ② → ①



⑦. Plate spring



⑧. S reel plate assembly.



2. Attaching

❶. Attach the parts in the order of ① → ⑧ → ⑦ → ④ → ③ → ② → ⑥ → ⑤.

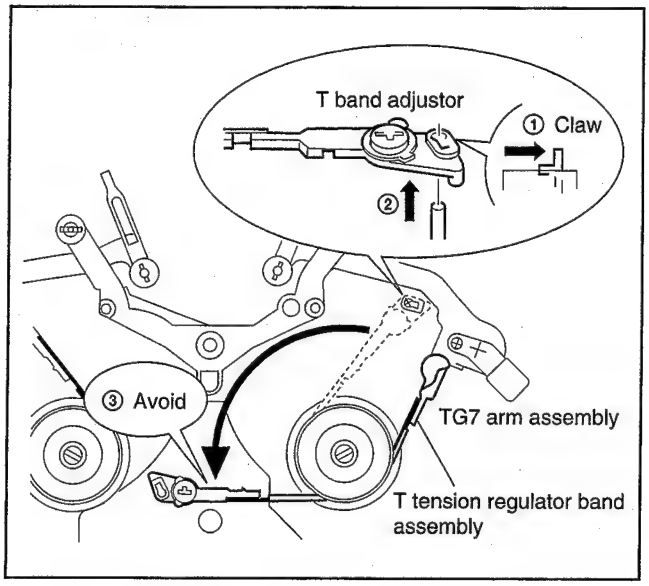
❷. Adjust them according to the flowchart (START-1) on page 5-43.

5-16. T REEL PLATE ASSEMBLY

1. Removing

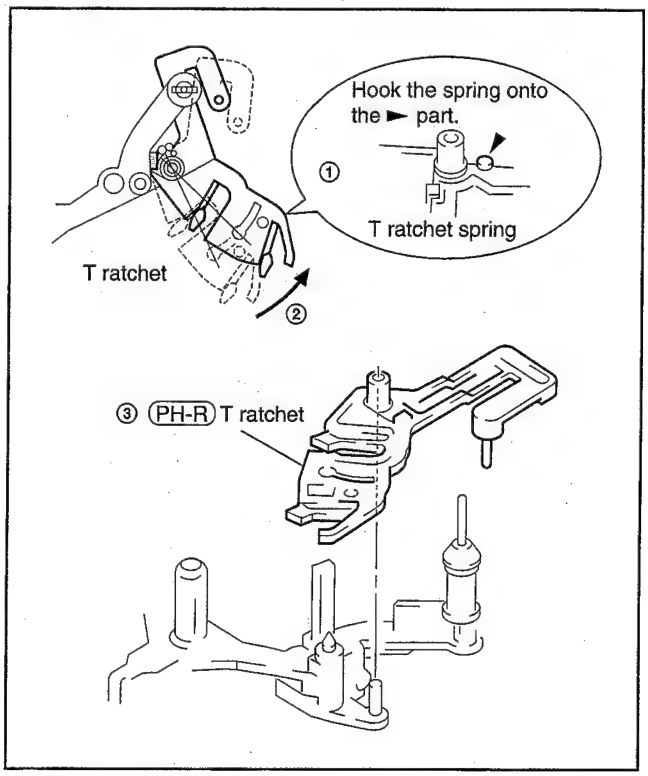
①. Set the (L cassette) position. (Refer to page 5-2)

②. T band adjustor.

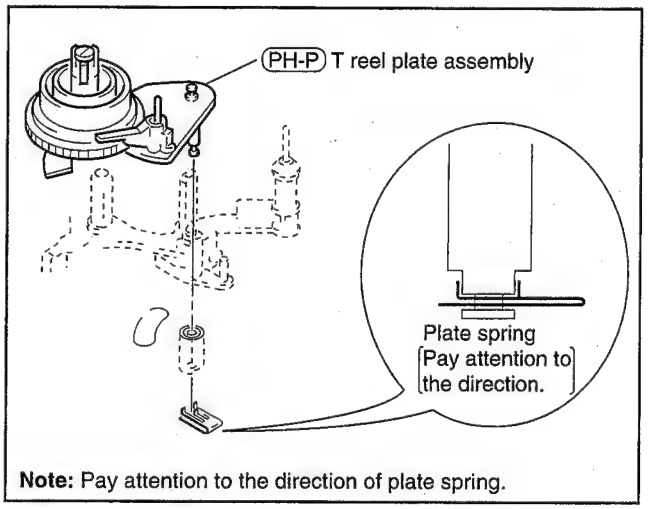


③. Set the (LOADING) position. (Refer to page 5-3)

④. T ratchet.

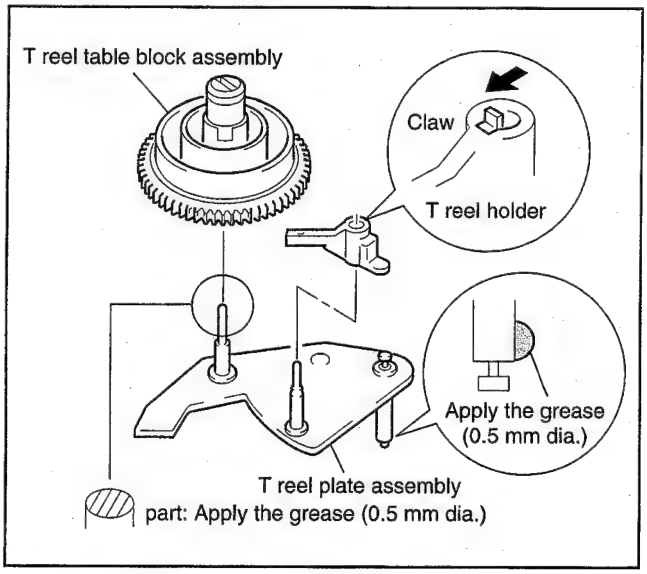


⑤. Plate spring.



Note: Pay attention to the direction of plate spring.

⑥. T reel plate assembly.



2. Attaching

❶. Attach the parts in the order of ① → ⑥ → ⑤ → ③ → ④ → ②.

❷. Adjust them according to the flowchart (START-1) on page 5-43.

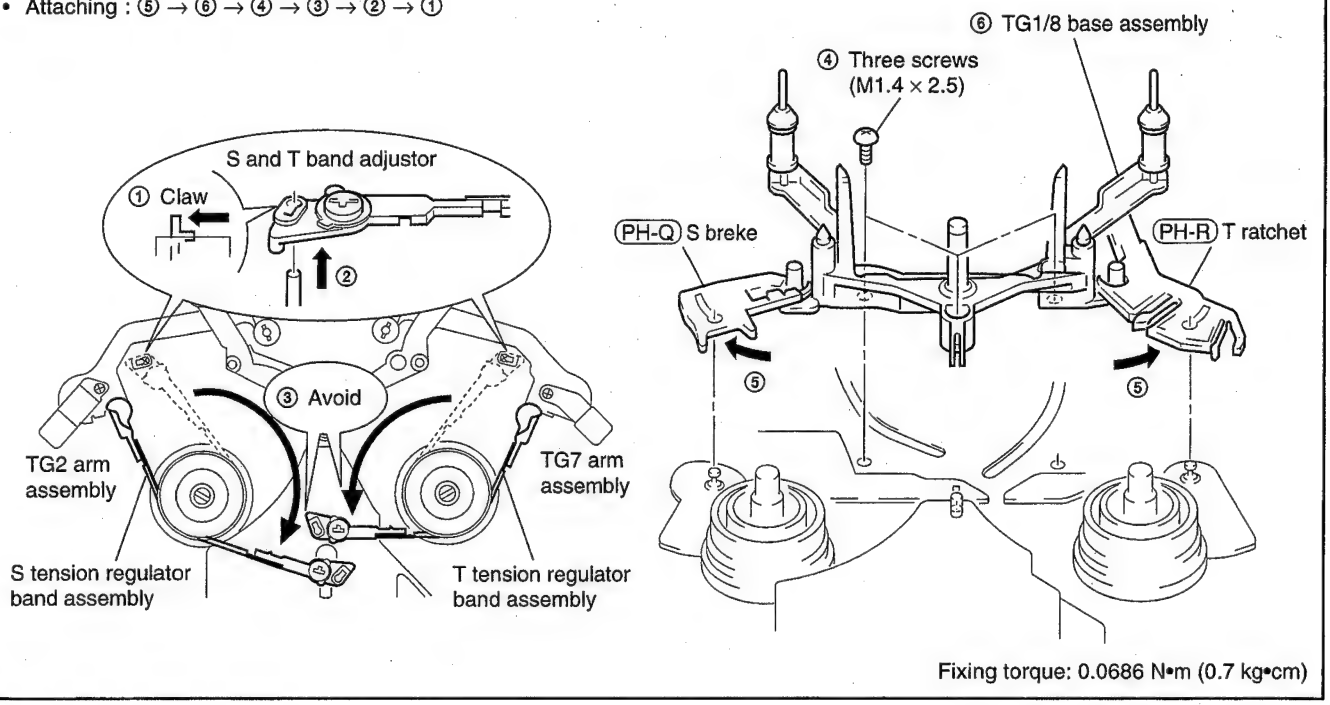
5-17. TG1/8 BASE ASSEMBLY, S BRAKE AND T RATCHET

1. Removing

①. Set the (LOADING) / (L cassette) positions. (Refer to pages 5-2 to 5-3)

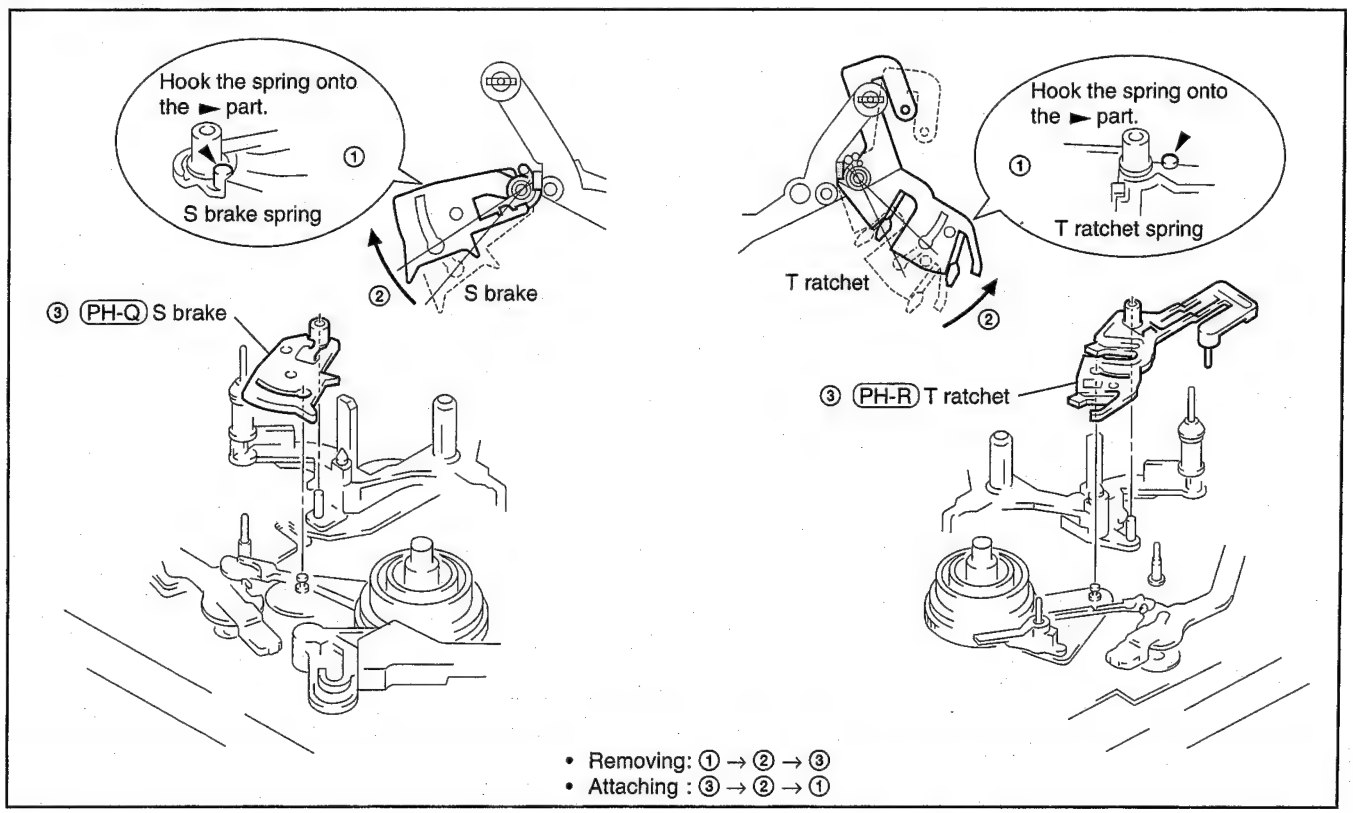
②. TG1/8 base assembly.

- Removing: ① → ② → ③ → ④ → ⑤ → ⑥
- Attaching : ⑤ → ⑥ → ④ → ③ → ② → ①



Fixing torque: 0.0686 N•m (0.7 kg•cm)

③. S brake and T ratchet.



- Removing: ① → ② → ③
- Attaching : ③ → ② → ①

2. Attaching

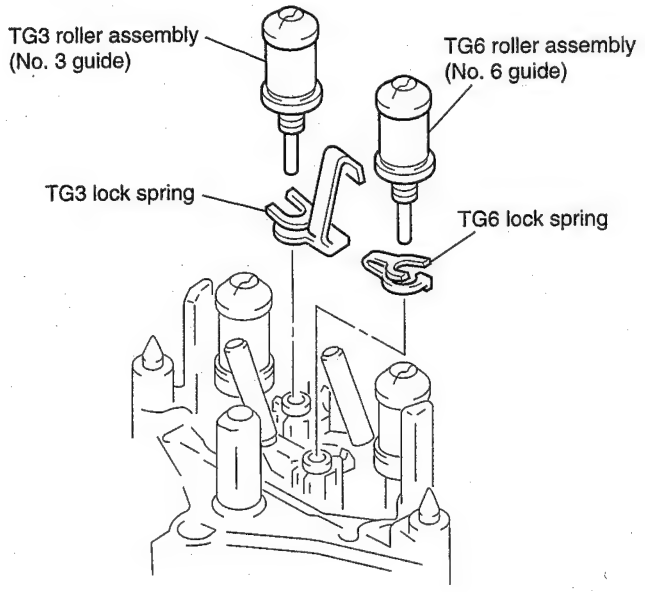
❶. Attach the parts in the order of ① → ③ → ②.

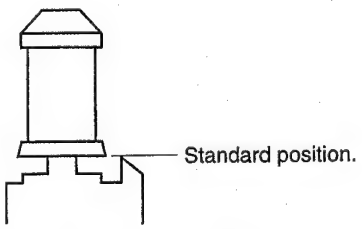
❷. Adjust them according to the flowchart (START-2) on page 5-43.

5-18. TG3/6 ROLLER ASSEMBLY AND TG3/6 LOCK SPRING

- **Removing/Attaching**

Note: (UNLOADING) position. (Refer to page 5-3)





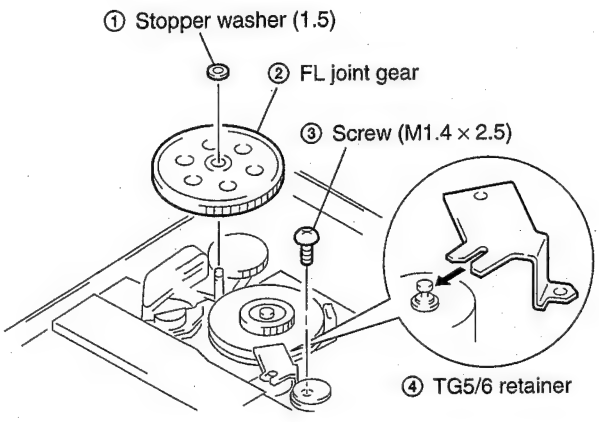
Preset the height as shown in the figure.

Note: After attaching each part, adjust them according to the flowchart (START-3) on page 5-43.

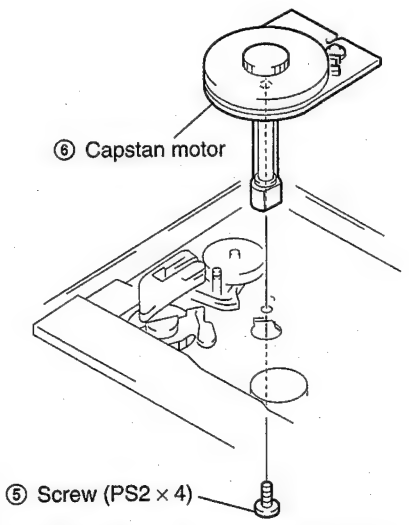
5-19. FL JOINT GEAR, TG5/6 RETAINER AND CAPSTAN MOTOR

- **Removing/Attaching**

- Removing: ① → ② → ③ → ④ → ⑤ → ⑥
- Attaching : ⑥ → ⑤ → ④ → ③ → ② → ①



Fixing torque ③: 0.0686 N•m (0.7 kg•cm)



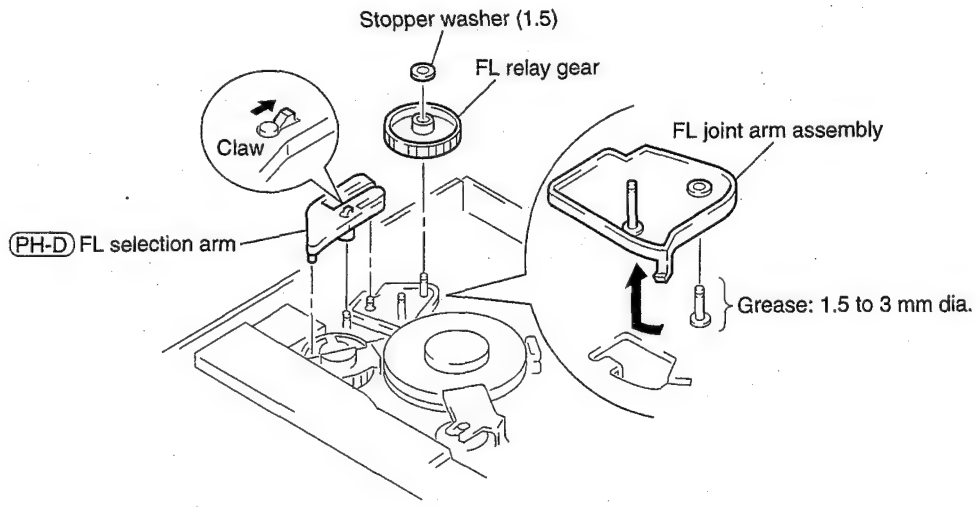
Fixing torque ⑤: 0.1961 N•m (2.0 kg•cm)

(PH-A) : Page 5-6
(PH-D) , (PH-G) : Page 5-7

5-20. FL SELECTION ARM, FL RELAY GEAR AND FL JOINT ARM ASSEMBLY

- **Removing/Attaching**

Note: First, remove the FL joint gear. (Refer to 5-19)

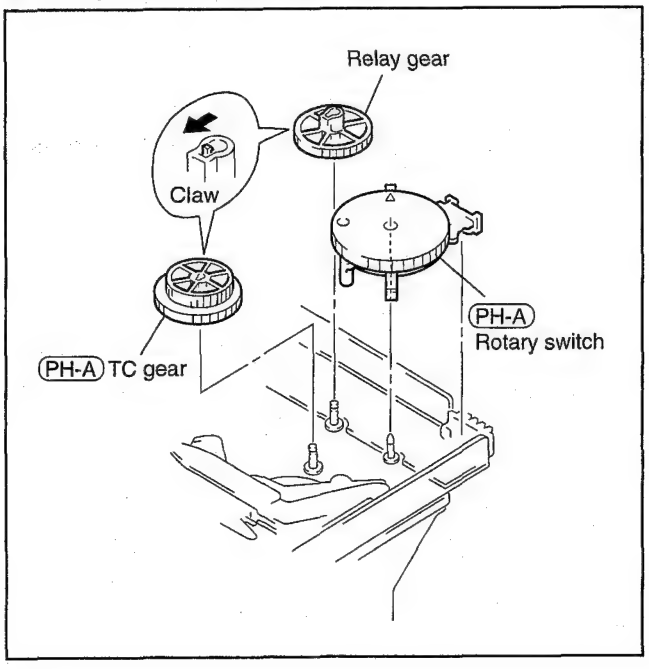


5-21. ROTARY SWITCH, TC GEAR AND RELAY GEAR

1. Removing

①. Set the (UNLOADING) position. (Refer to page 5-3)

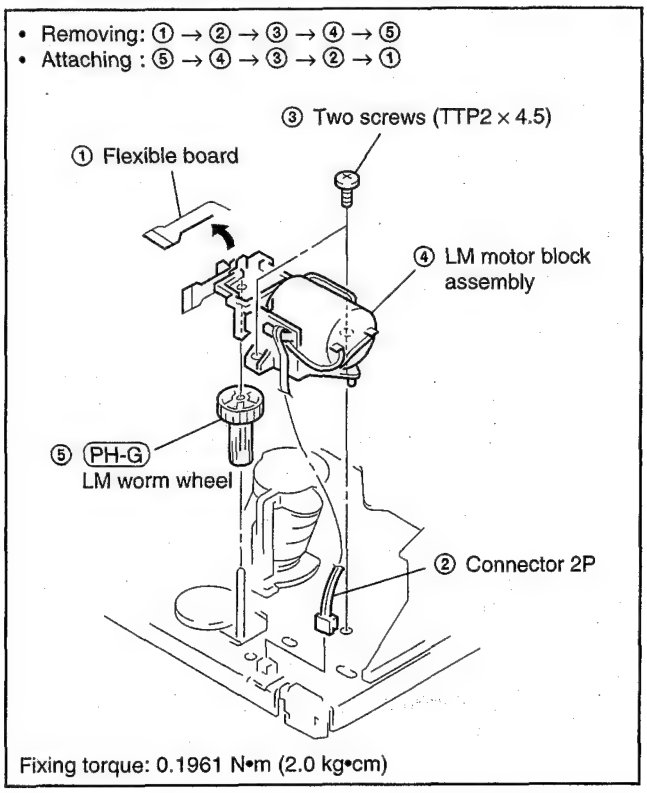
②. Rotary switch, TC gear and relay gear.



2. Attaching

❶. Remove the LM motor block assembly and LM worm wheel. (To synchronize phase of the pinch driving system (front side) and the loading driving system (back side))

- Removing: ① → ② → ③ → ④ → ⑤
- Attaching : ⑤ → ④ → ③ → ② → ①

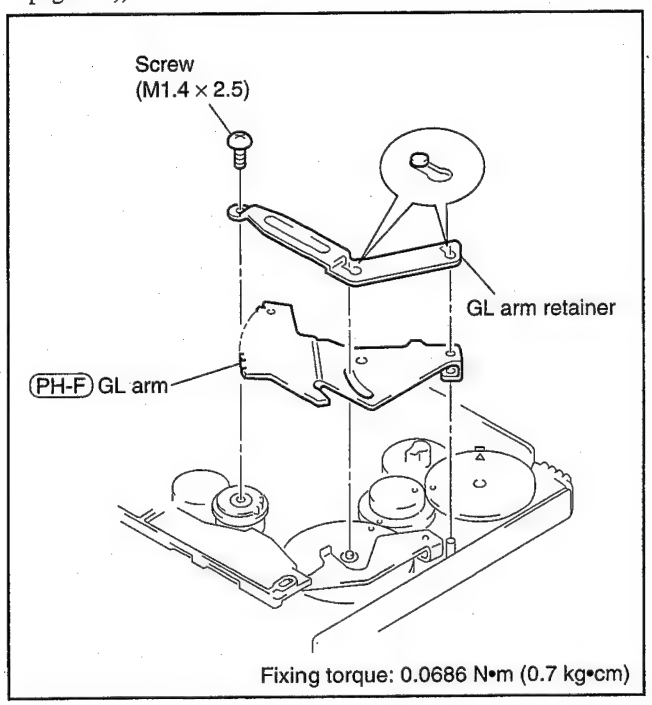


❷. Attach the TC gear, relay gear and rotary switch.
❸. Attach the LM worm wheel and LM motor block assembly.

(PH-B) : Page 5-6 (PH-R) : Page 5-10
(PH-D), (PH-E), (PH-F) : Page 5-7 (PH-V) : Page 5-11

5-22. GL ARM RETAINER AND GL ARM

- **Removing/Attaching** ((UNLOADING) position. (Refer to page 5-3))



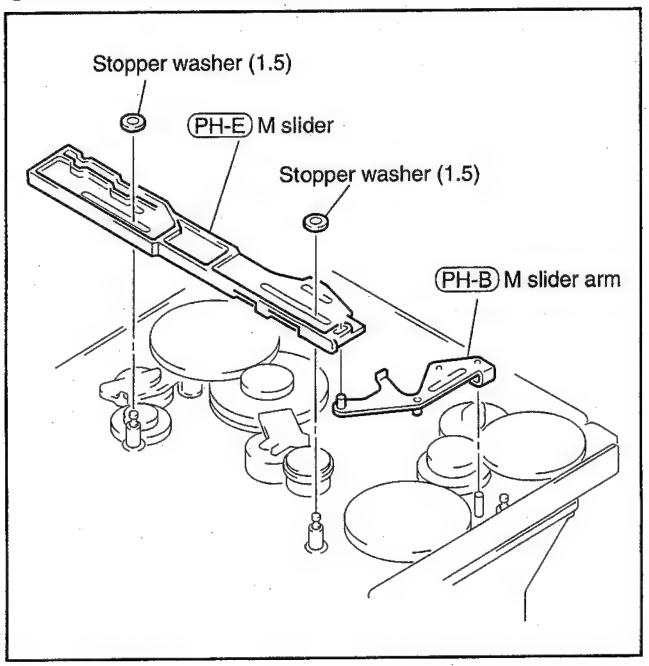
5-23. M SLIDER AND M SLIDER ARM

1. Removing

①. Set the (UNLOADING) position. (Refer to page 5-3)

②. GL arm retainer and GL arm. (Refer to 5-22)

③. M slider and M slider arm.



2. Attaching

- Attach the parts in the order of ① → ③ → ②.

5-24. TG7 SELECTION ARM, TG7 CAM GEAR AND T CAM GEAR

1. Removing

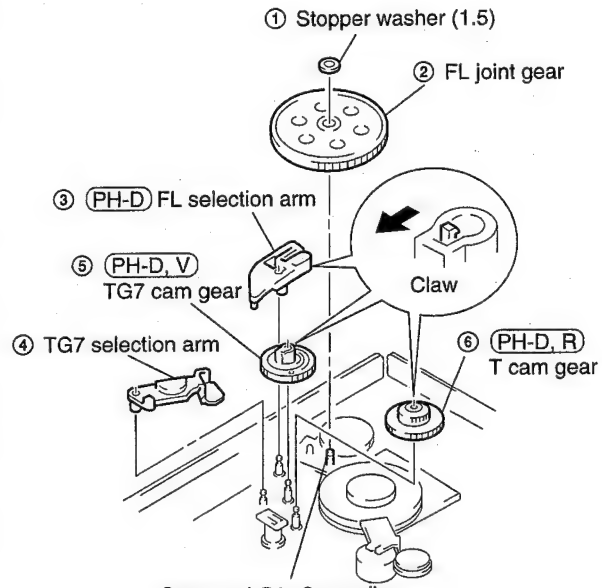
①. Set the (UNLOADING) position. (Refer to page 5-3)

②. GL arm retainer and GL arm. (Refer to 5-22)

③. M slider and M slider arm. (Refer to 5-23)

④. TG7 selection arm, TG7 cam gear and T cam gear.

- Removing: ① → ② → ③ → ④ → ⑤ → ⑥
- Attaching : ⑥ → ⑤ → ④ → ③ → ② → ①



2. Attaching

❶. Attach the parts in the order of ① → ④ → ③ → ②.

Cam groove on the T cam gear.

Apply the grease (3 mm dia) to of cam groove (▒ part).

T cam gear
(T ratchet driving side)

(PH-A) : Page 5-6
(PH-G) : Page 5-7
(PH-T), (PH-U) : Page 5-11

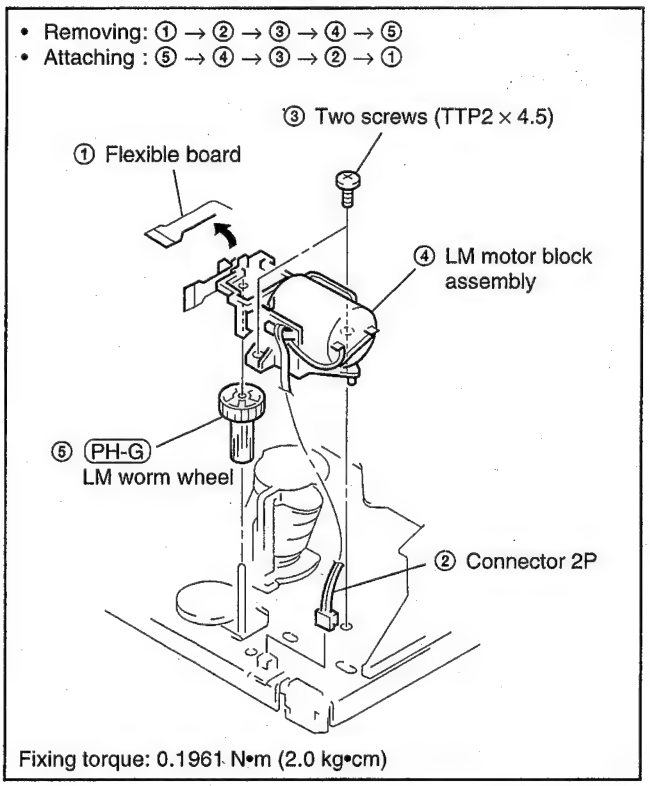
5-25. MAIN CAM, TG2 SL ARM ASSEMBLY AND TENSION COIL SPRING (TG2 SL)

The two grooves on one side of the main cam drive the TG2 selection arm and the TG2 load arm assembly.
Since it is difficult to attach the main cam, fix the TG2 selection arm and the TG2 load arm assembly with the main cam's phase adjusted correctly (Nearly unloading position (See 3-1. Phase Adjustment Ⓐ: page 5-6)), so that later mounting work can be performed smoothly. If fixed parts are shifted, follow "3-3. Phase Adjustment Ⓣ, Ⓤ: page 5-11".

1. Removing

①. Set the (UNLOADING) position. (Refer to page 5-3)

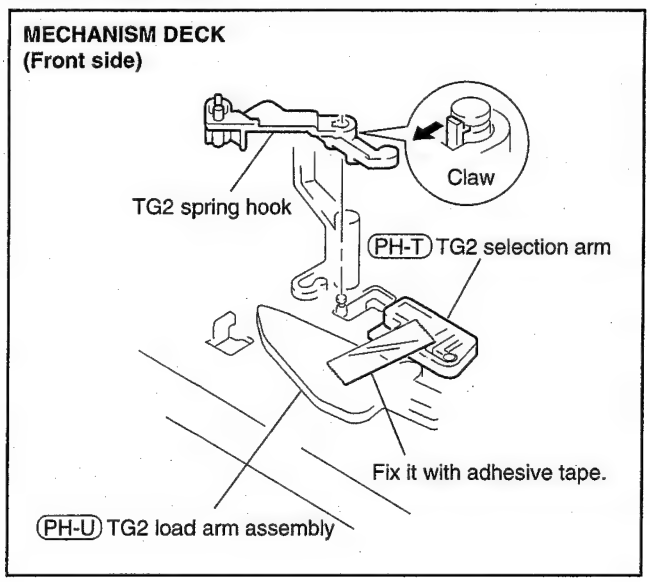
②. LM motor block assembly and LM worm wheel.



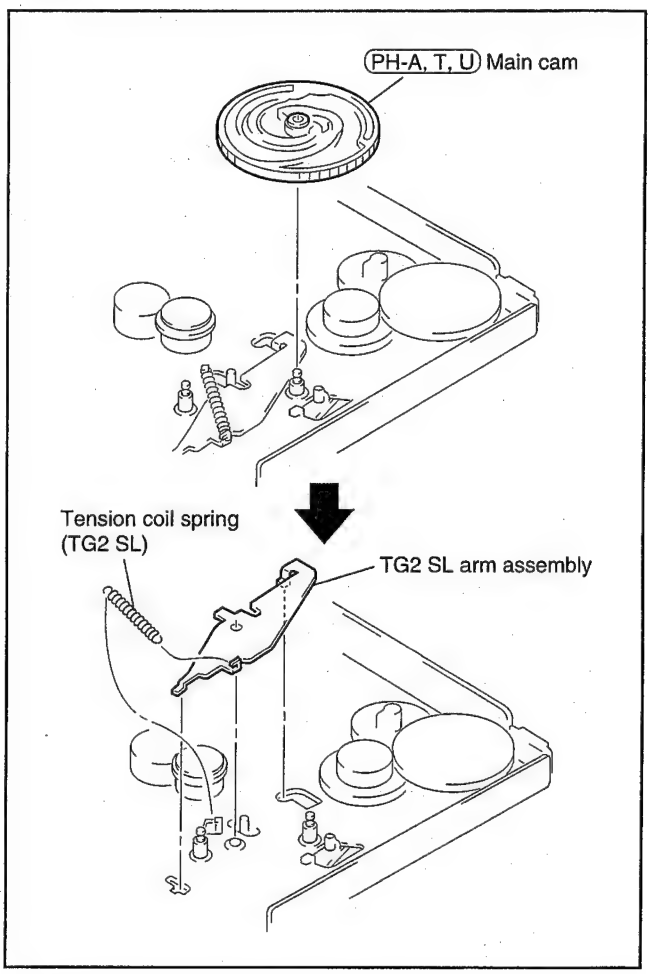
③. GL arm retainer and GL arm. (Refer to 5-22)

④. M slider and M slider arm. (Refer to 5-23)

⑤. TG2 spring hook.



⑥. Main cam, TG2 SL arm assembly and tension coil spring (TG2 SL).



2. Attaching

❶. Attach the parts in the order of ① → ⑥ → ⑤ → ④ → ③ → ②.

❷. Adjust them according to the flowchart (START-2) on page 5-43.

Main cam (rear side)

Cam groove on the main cam.

Apply the grease (12 mm dia.) to each two of cam groove (part).

(PH-A) : Page 5-6
(PH-F), (PH-G) : Page 5-7

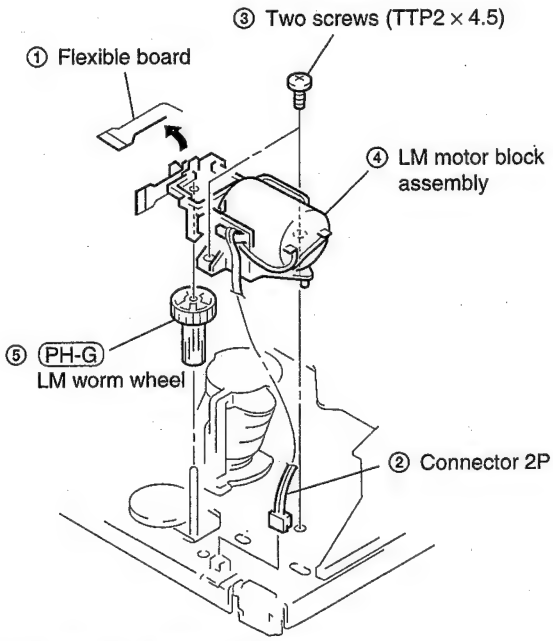
5-26. TG3/4 ARM BLOCK ASSEMBLY (TG3/4 ARM ASSEMBLY, TG3/4 LIMITER SPRING AND TG3/4 GEAR), TG3/4 BASE BLOCK ASSEMBLY (TG3/4 BASE ASSEMBLY)

1. Removing

①. Set the (UNLOADING) position. (Refer to page 5-3)

②. LM motor block assembly and LM worm wheel.

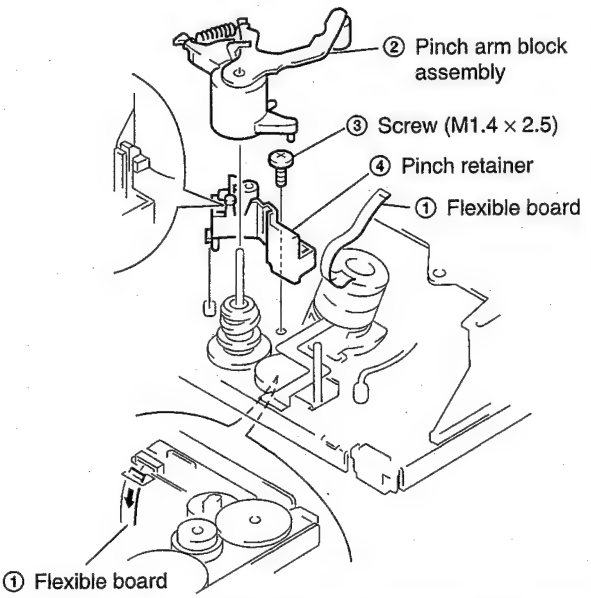
- Removing: ① → ② → ③ → ④ → ⑤
- Attaching : ⑤ → ④ → ③ → ② → ①



Fixing torque: 0.1961 N•m (2.0 kg•cm)

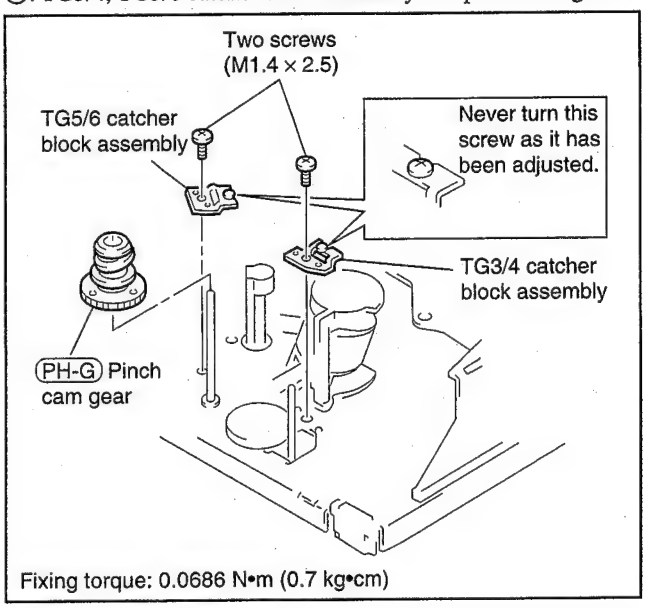
③. Pinch arm block assembly and pinch retainer.

- Removing: ① → ② → ③ → ④
- Attaching : ④ → ③ → (PH-G) → ② → ①



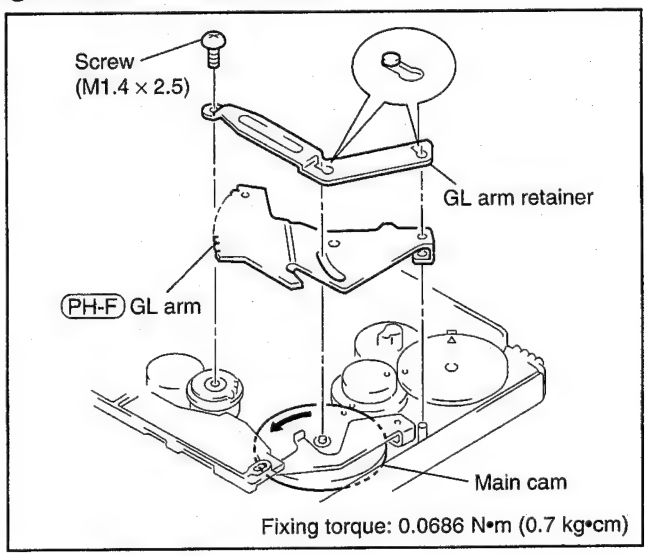
Fixing torque: 0.0686 N•m (0.7 kg•cm)

④. TG3/4, TG5/6 catcher block assembly and pinch cam gear.



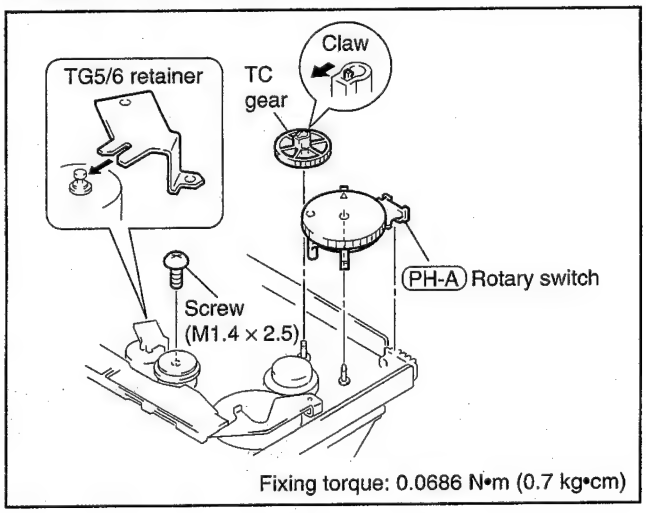
Fixing torque: 0.0686 N•m (0.7 kg•cm)

⑤. GL arm retainer and GL arm.



Fixing torque: 0.0686 N•m (0.7 kg•cm)

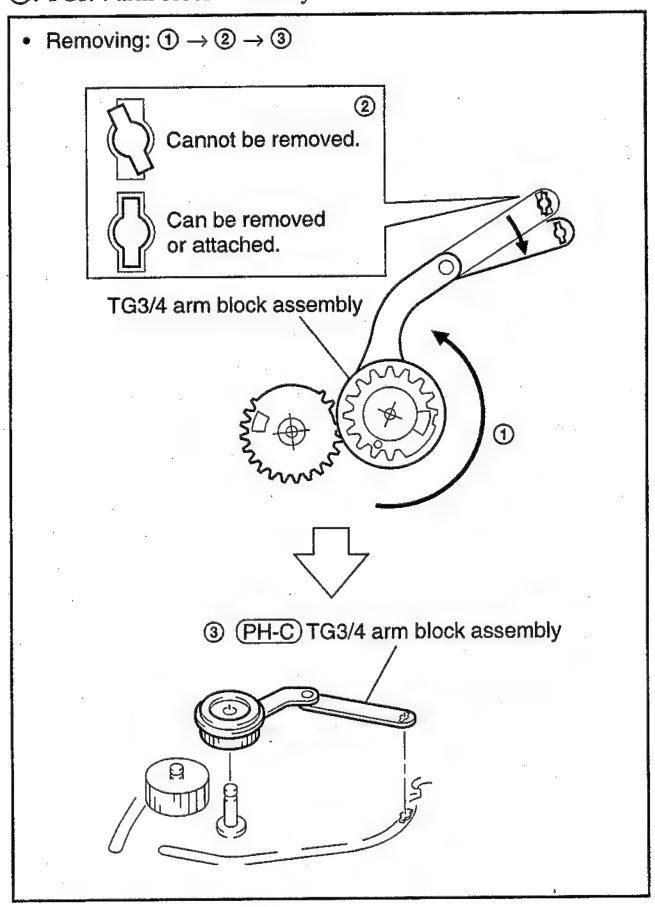
⑥. Rotary switch, TC gear and TG5/6 retainer.



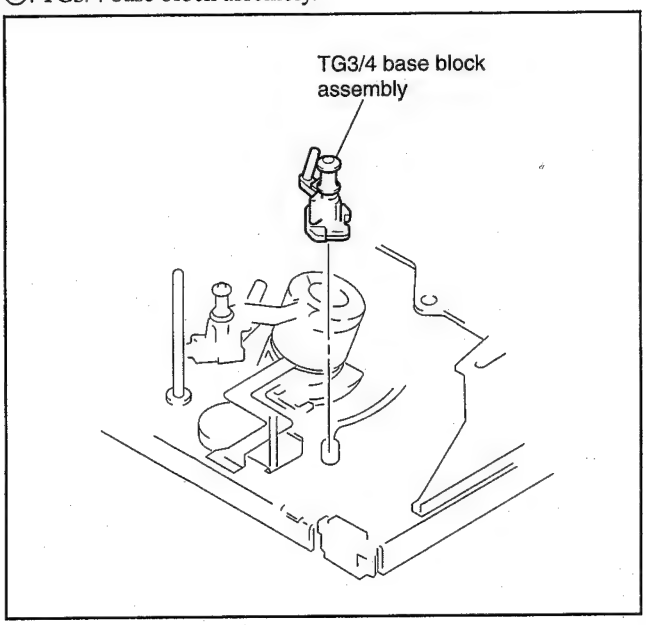
Fixing torque: 0.0686 N•m (0.7 kg•cm)

⑦. Set the LOADING position. (Refer to page 5-3)

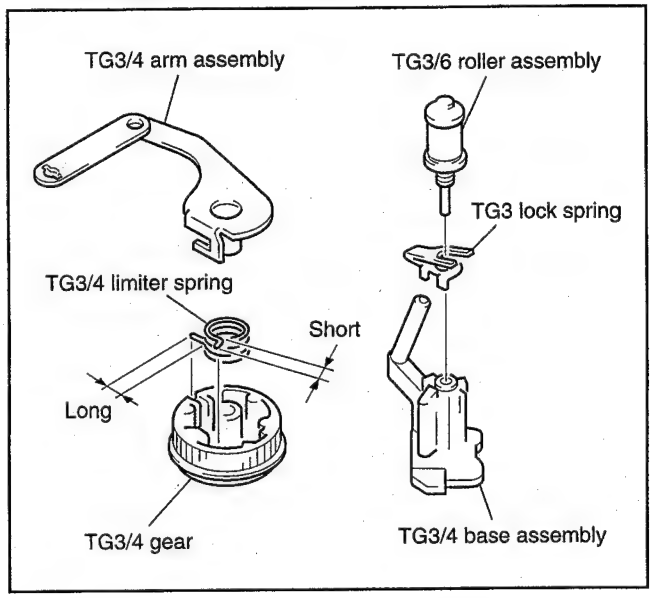
⑧. TG3/4 arm block assembly.



⑨. TG3/4 base block assembly.

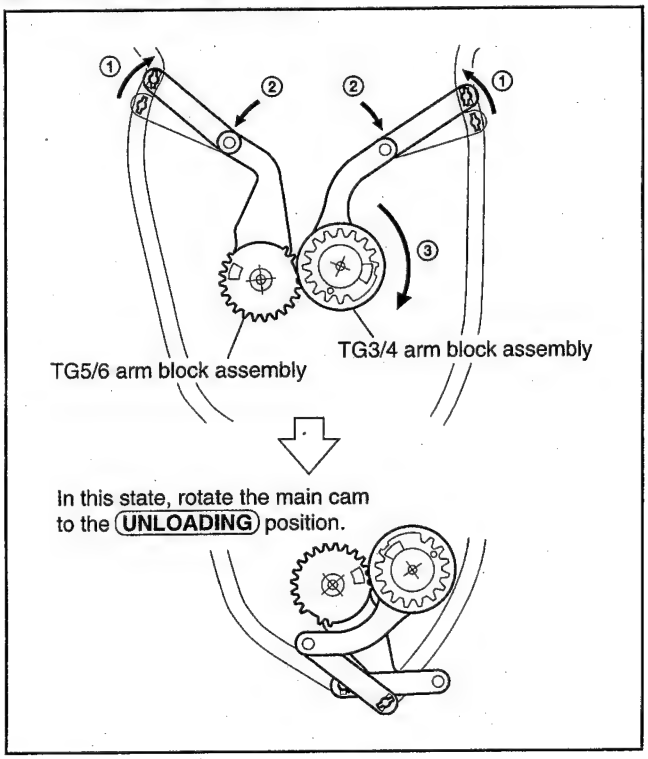


⑩. TG3/4 arm assembly, TG3/4 limiter spring, TG3/4 gear, TG3/6 roller assembly, TG3 lock spring and TG3/4 base assembly.



2. Attaching

❶. Set the LOADING position. (Refer to page 5-3)
❷. TG3/4 arm assembly, TG3/4 limiter spring, TG3/4 gear, TG3/6 roller assembly, TG3 lock spring and TG3/4 base assembly.
❸. TG3/4 base block assembly.
❹. TG3/4 arm block assembly.



❺. Attach the parts in the order of ⑥ → ⑤ → ④ → ③ → ②.
❻. Adjust them according to the flowchart (START-3) on page 5-43.

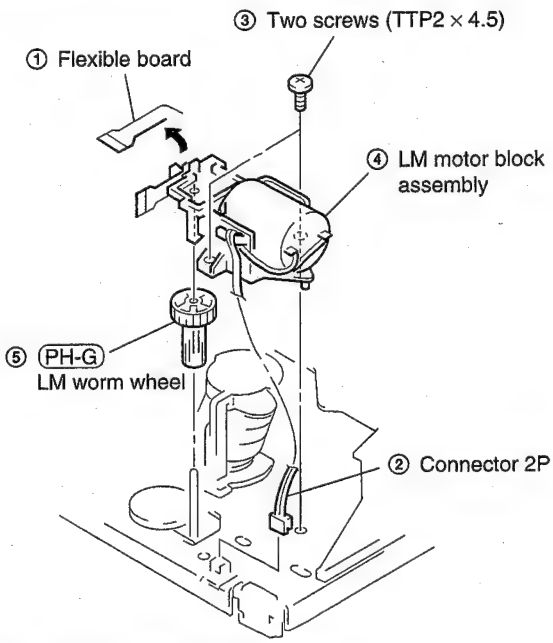
5-27. TG5/6 ARM BLOCK ASSEMBLY (TG5/6 ARM ASSEMBLY, TG5/6 LIMITER SPRING AND TG5/6 GEAR), TG5/6 BASE BLOCK ASSEMBLY (TG5/6 BASE ASSEMBLY)

1. Removing

①. Set the (UNLOADING) position. (Refer to page 5-3)

②. LM motor block assembly and LM worm wheel.

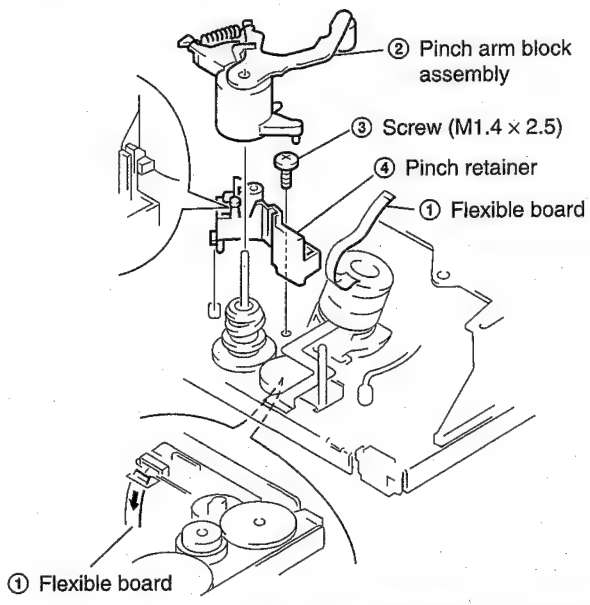
- Removing: ① → ② → ③ → ④ → ⑤
- Attaching : ⑤ → ④ → ③ → ② → ①



Fixing torque: 0.1961 N•m (2.0 kg•cm)

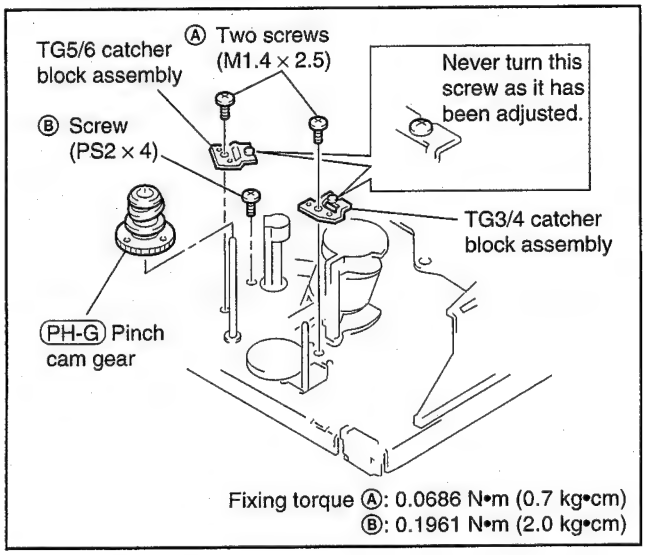
③. Pinch arm block assembly and pinch retainer.

- Removing: ① → ② → ③ → ④
- Attaching : ④ → ③ → (PH-G) → ② → ①



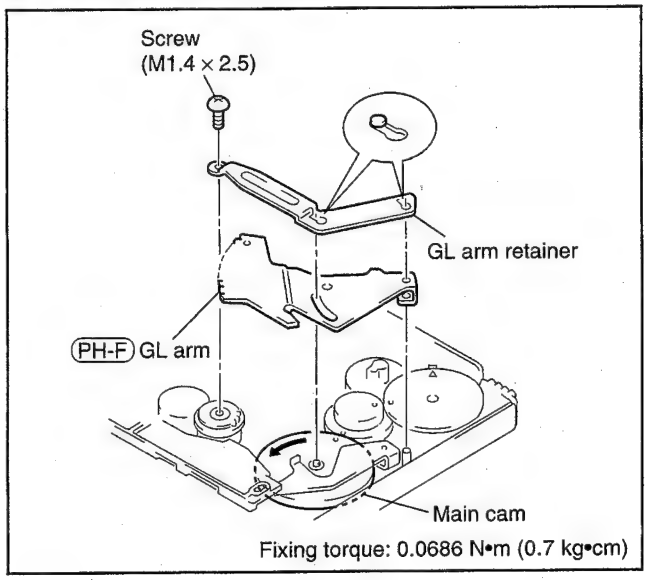
Fixing torque: 0.0686 N•m (0.7 kg•cm)

④. TG3/4, TG5/6 catcher block assembly, screw of capstan motor and pinch cam gear.



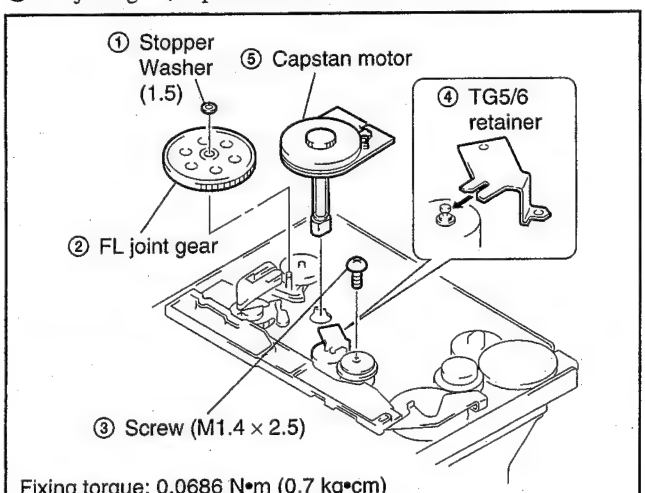
Fixing torque Ⓐ: 0.0686 N•m (0.7 kg•cm)
Ⓑ: 0.1961 N•m (2.0 kg•cm)

⑤. GL arm retainer and GL arm.



Fixing torque: 0.0686 N•m (0.7 kg•cm)

⑥. FL joint gear, capstan motor and TG5/6 retainer.

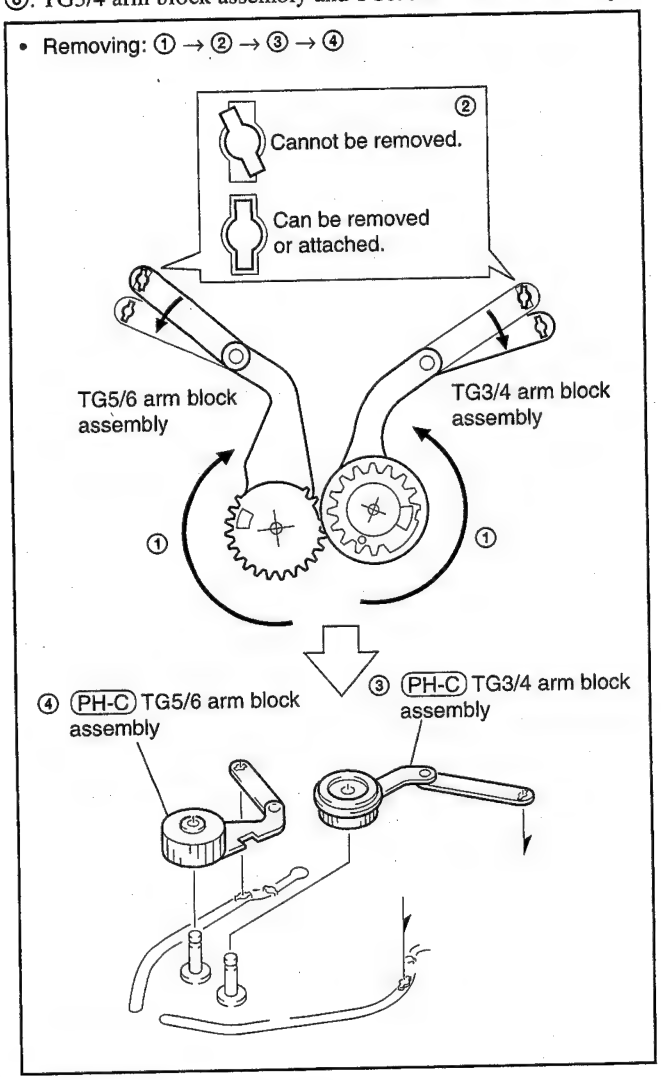


Fixing torque: 0.0686 N•m (0.7 kg•cm)

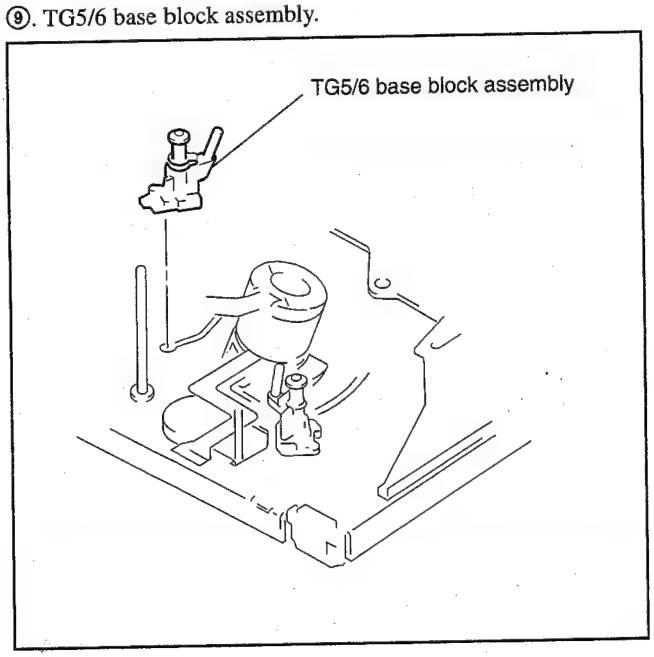
- Removing: ① → ② → ③ → ④ → ⑤
- Attaching : ⑤ → ④ → ③ → ② → ①

⑦. Set the (LOADING) position. (Refer to page 5-3)

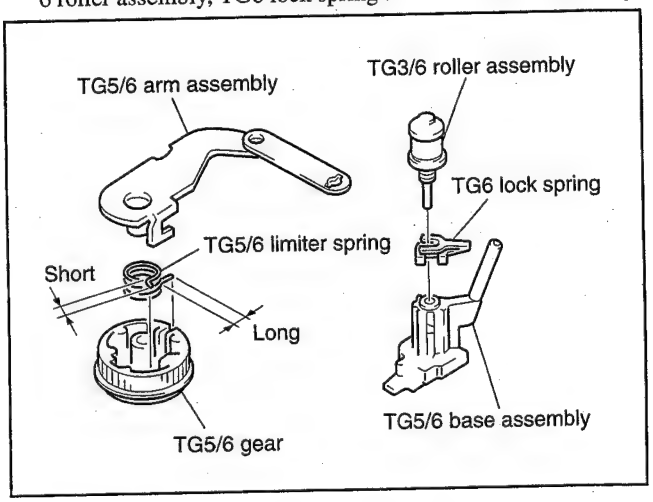
⑧. TG3/4 arm block assembly and TG5/6 arm block assembly.



⑨. TG5/6 base block assembly.

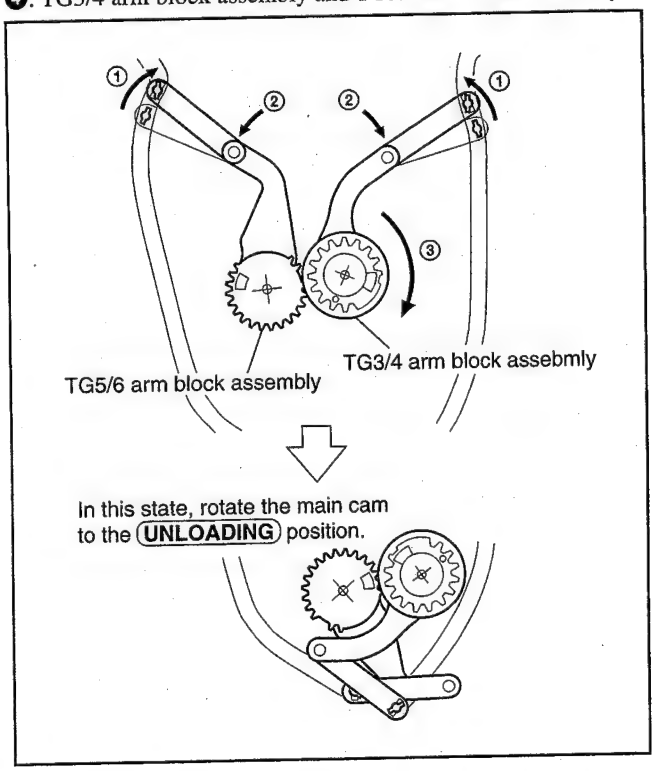


⑩. TG5/6 arm assembly, TG5/6 limiter spring, TG5/6 gear, TG3/6 roller assembly, TG6 lock spring and TG5/6 base assembly.



2. Attaching

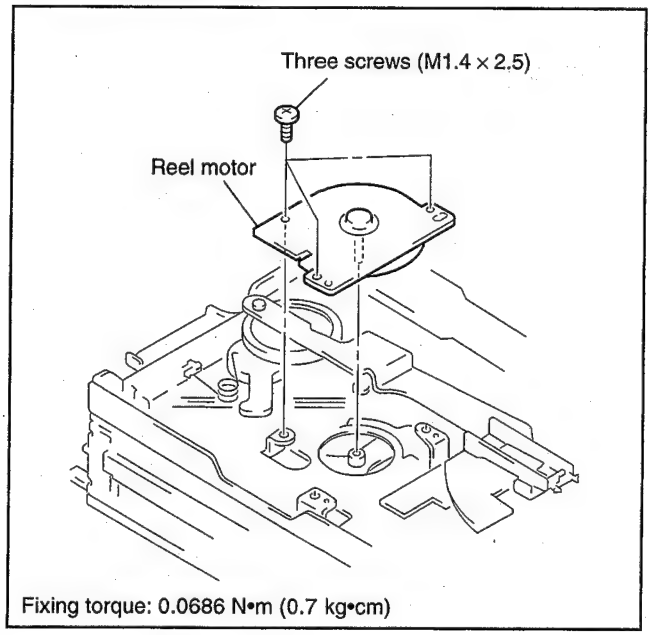
❶. Set the (LOADING) position. (Refer to page 5-3)
❷. TG5/6 arm assembly, TG5/6 limiter spring, TG5/6 gear, TG3/6 roller assembly, TG6 lock spring and TG5/6 base assembly.
❸. TG5/6 base block assembly.
❹. TG3/4 arm block assembly and TG5/6 arm block assembly.



❺. Attach the parts in the order of ⑥ → ⑤ → ④ → ③ → ②.
❻. Adjust them according to the flowchart (START-3) on page 5-43.

5-28. REEL MOTOR

• **Removing/Attaching**

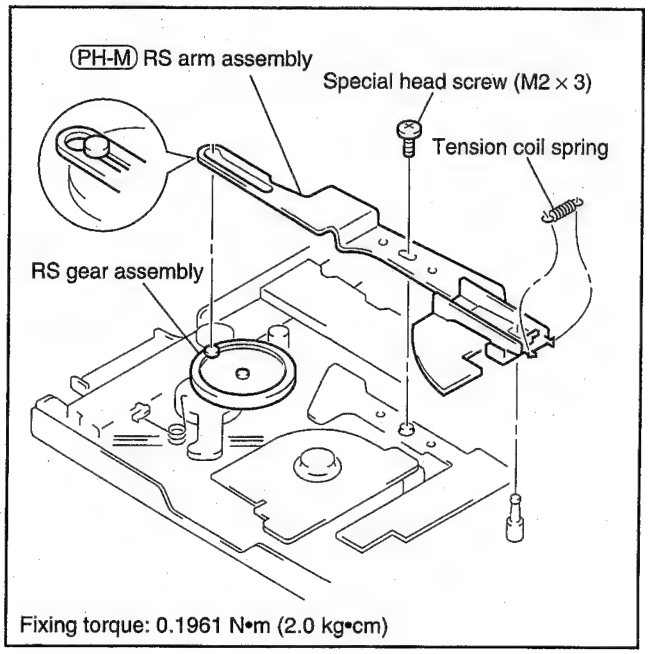


5-29. RS ARM ASSEMBLY

1. Removing

①. Set the (S/L cassette) position. (Refer to page 5-2)

②. RS arm assembly.



2. Attaching

• Attach the parts in the order of ① → ②.

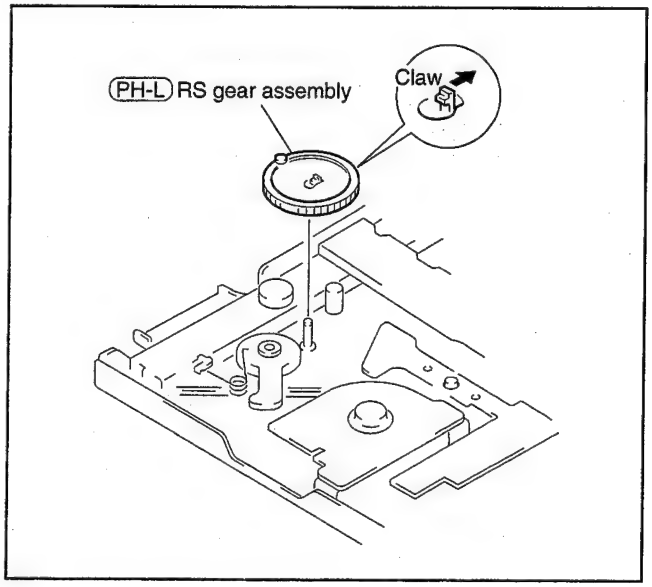
5-30. RS GEAR ASSEMBLY, MIC PRESS SPRING AND MIC LEVER

1. Removing

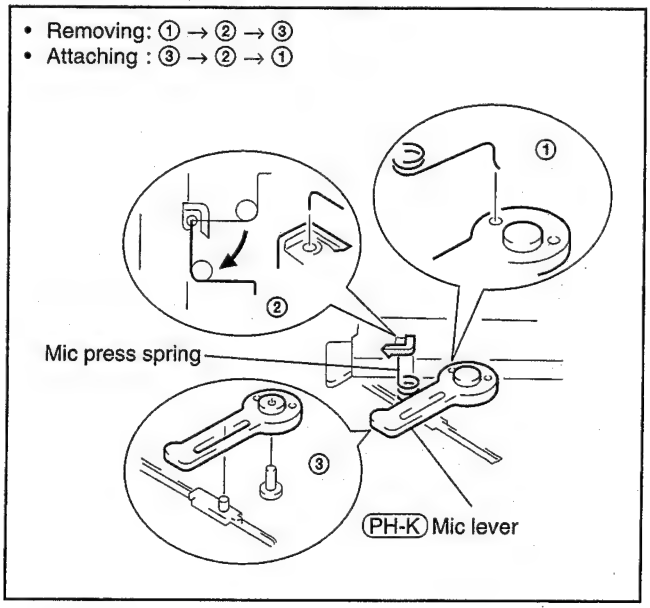
①. Set the (S/L cassette) position. (Refer to page 5-2)

②. RS arm assembly. (Refer to 5-29)

③. RS gear assembly.



④. Mic press spring and Mic lever.



2. Attaching

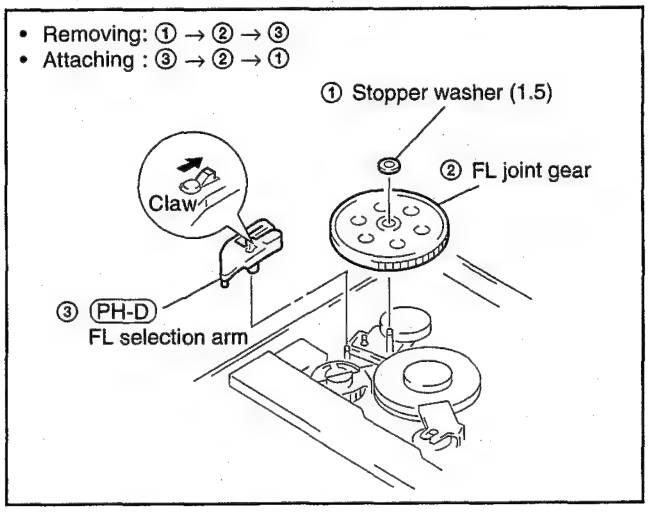
• Attach the parts in the order of ① → ④ → ③ → ②.

(PH-D) : Page 5-7
(PH-J) : Page 5-8
(PH-K) : Page 5-9

5-31. RACK JOINT GEAR, RACK HOLDER, MIC HOLDER, RACK (LC) AND RACK (SC)

1. Removing

①. FL joint gear, TG7 selection arm.

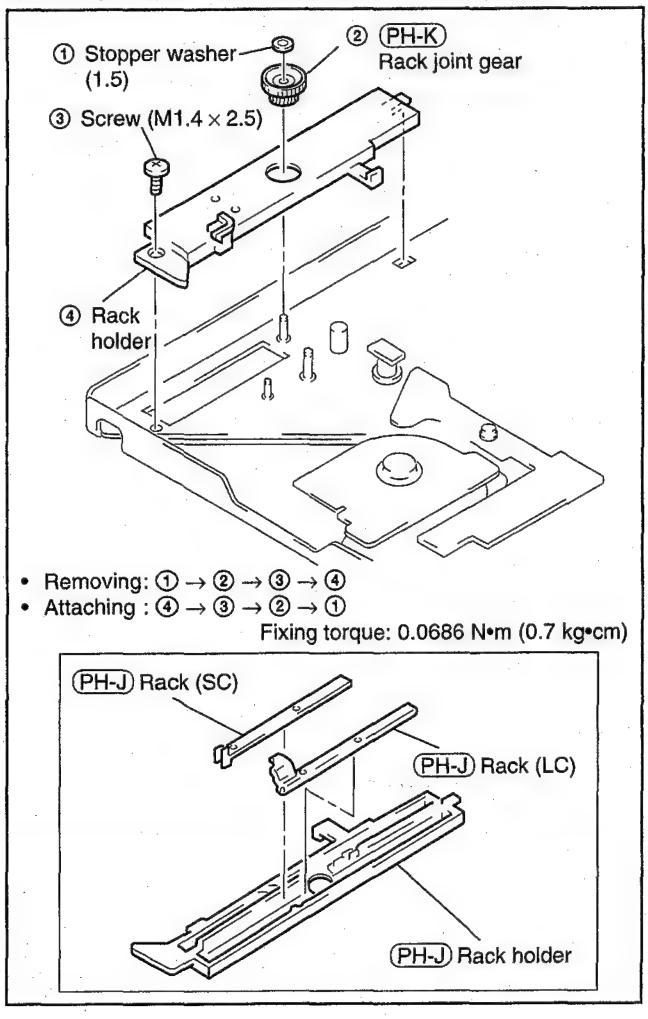


②. Set the (S/L cassette) position. (Refer to page 5-2)

③. RS arm assembly. (Refer to 5-29)

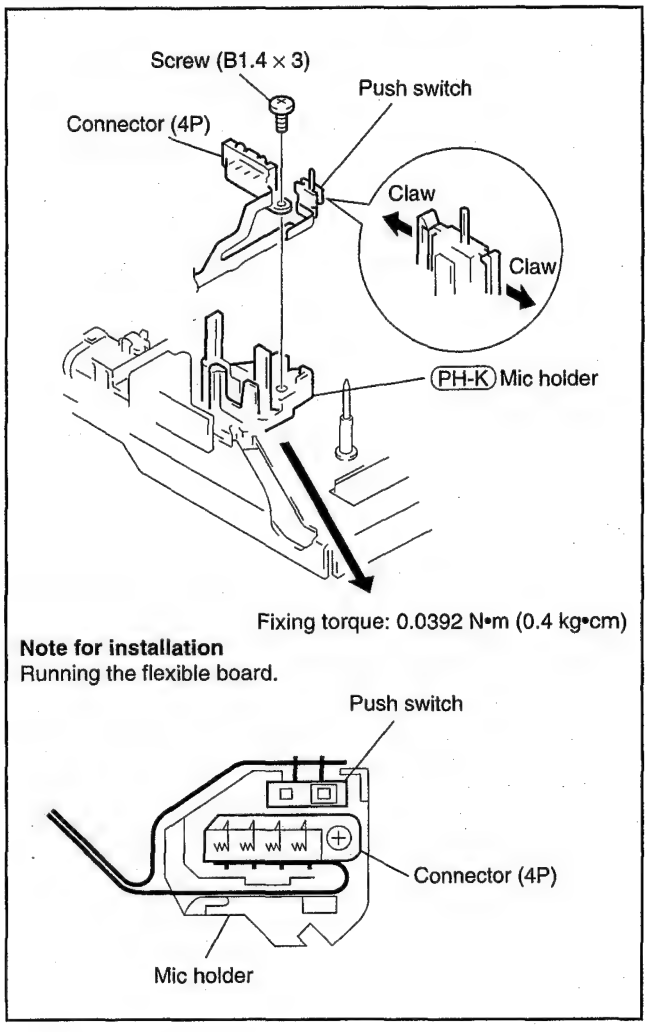
④. RS gear assembly, Mic press spring and Mic lever. (Refer to 5-30)

⑤. Rack joint gear, rack holder, rack (LC) and rack (SC).



⑥. FL block assembly. (Refer to page 5-2)

⑦. Push switch, Connector (4P), Mic holder.



Note for installation

Running the flexible board.

2. Attaching

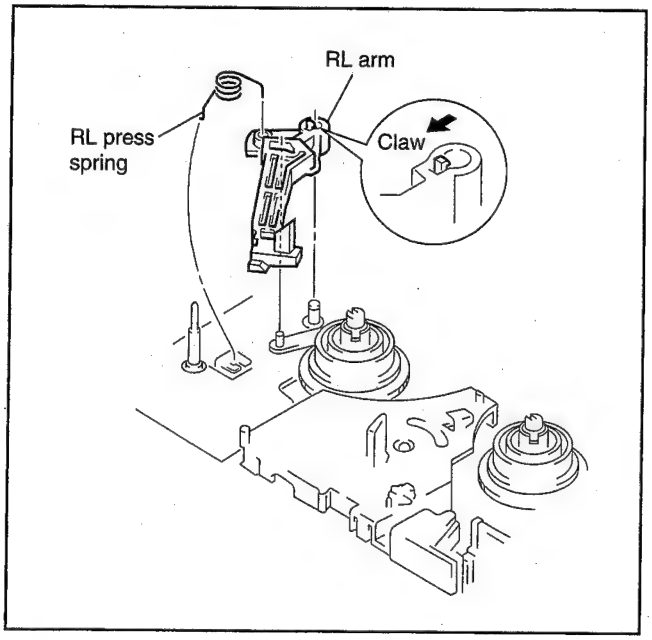
• Attach the parts in the order of ② → ⑦ → ⑥ → ⑤ → ④ → ③ → ①.

5-32. PLATE LINK ASSEMBLY

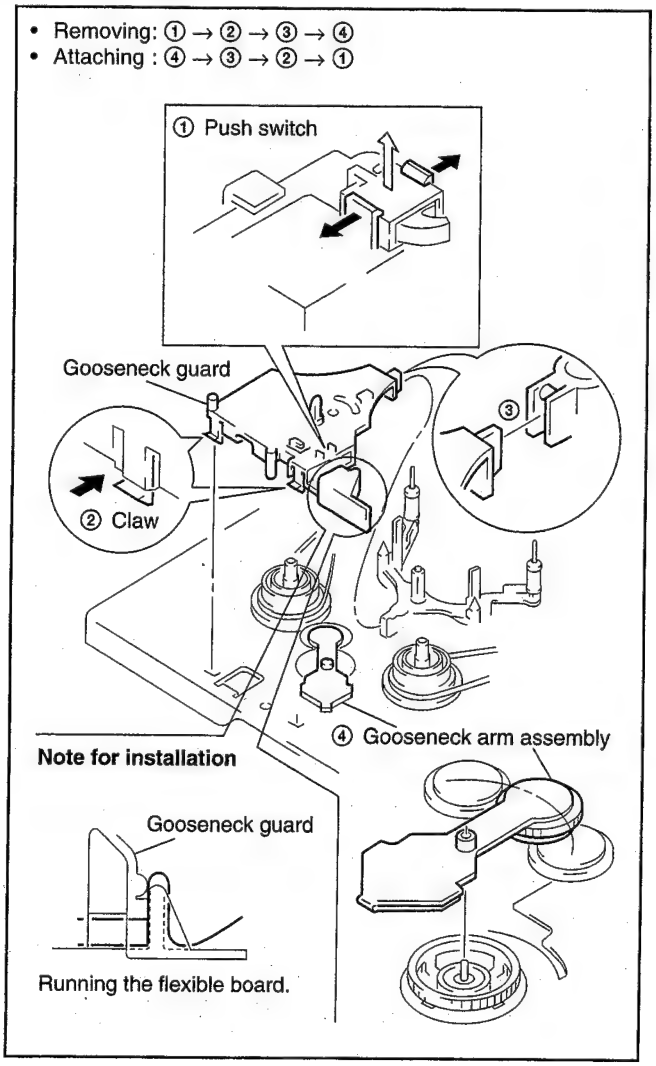
1. Removing

①. Set the (L cassette) position. (Refer to page 5-2)

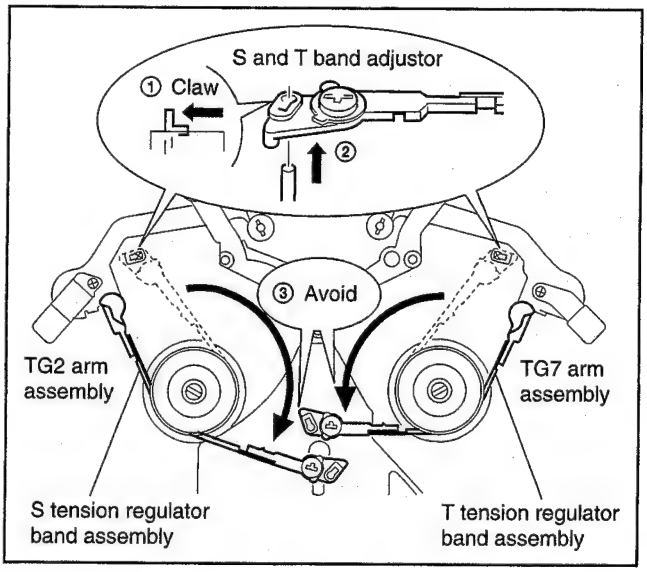
②. RL arm.



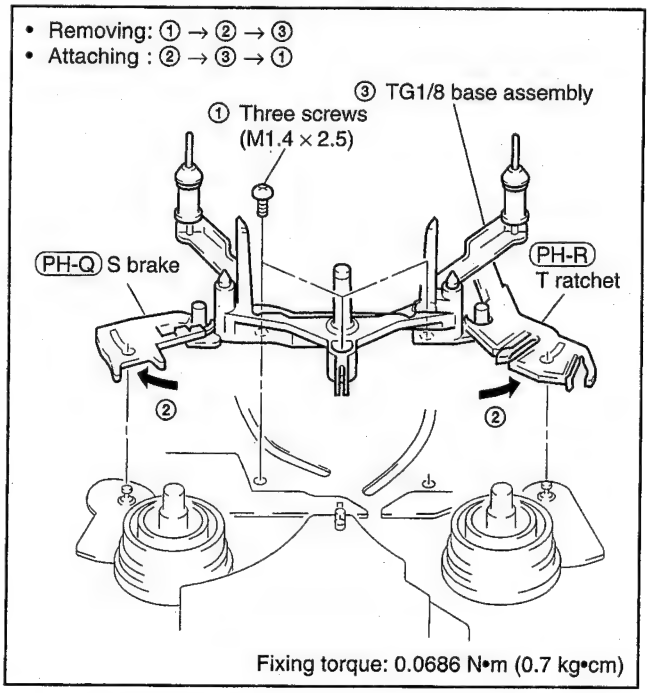
③. Gooseneck guard.



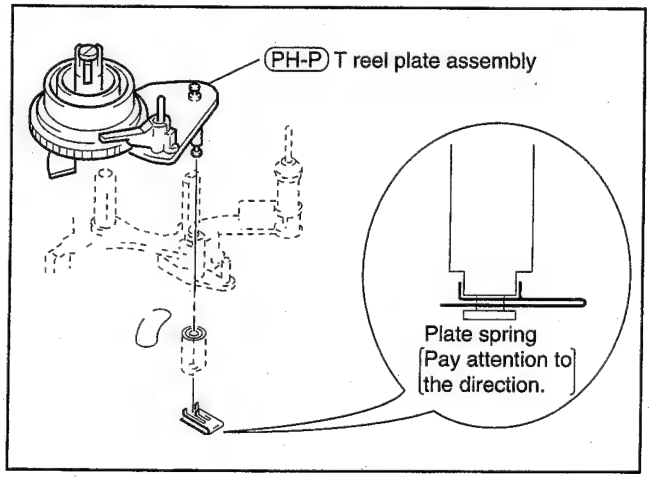
④. S and T band adjustor.



⑤. TG1/8 base assembly. (S brake and T ratchet)

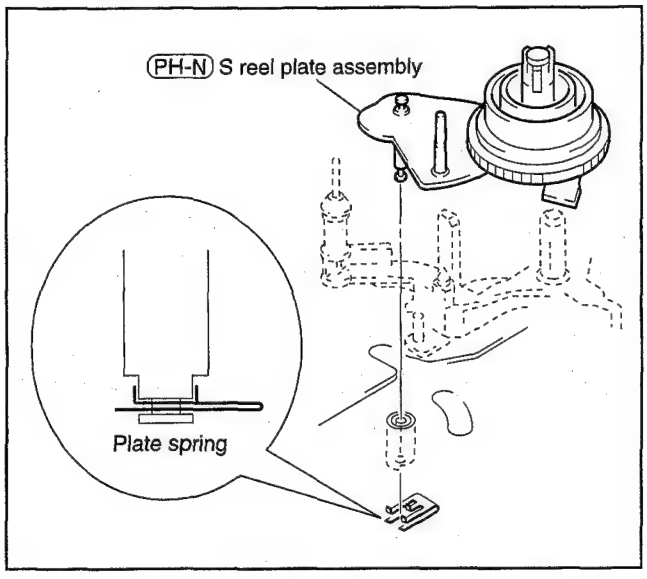


⑥. T reel plate assembly.



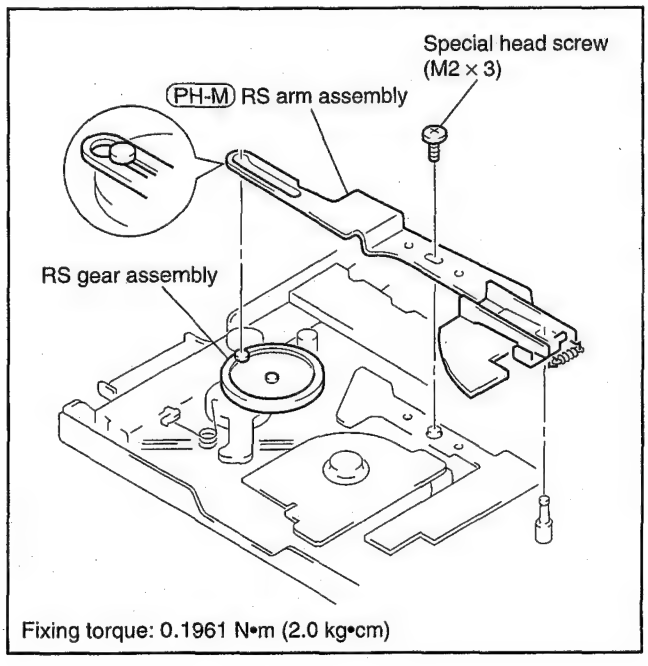
(PH-H) : Page 5-8
(PH-M) : Page 5-9
(PH-N) : Page 5-10

⑦. S reel plate assembly.

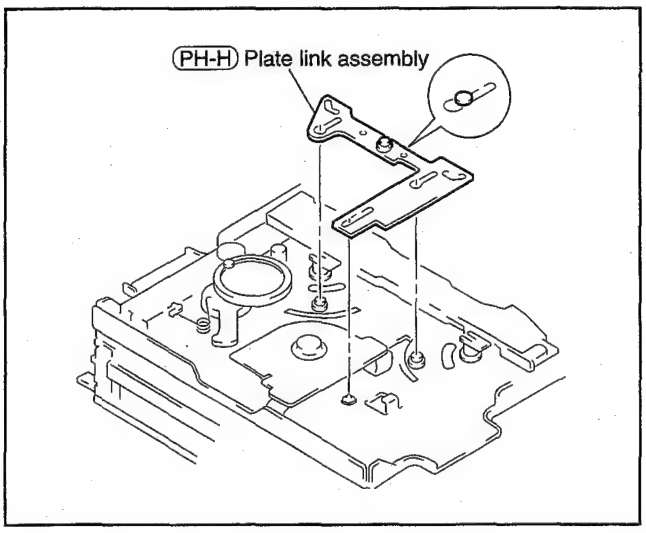


⑧. Set the (S/L cassette) position. (Refer to page 5-2)

⑨. RS arm assembly.



⑩. Plate link assembly.



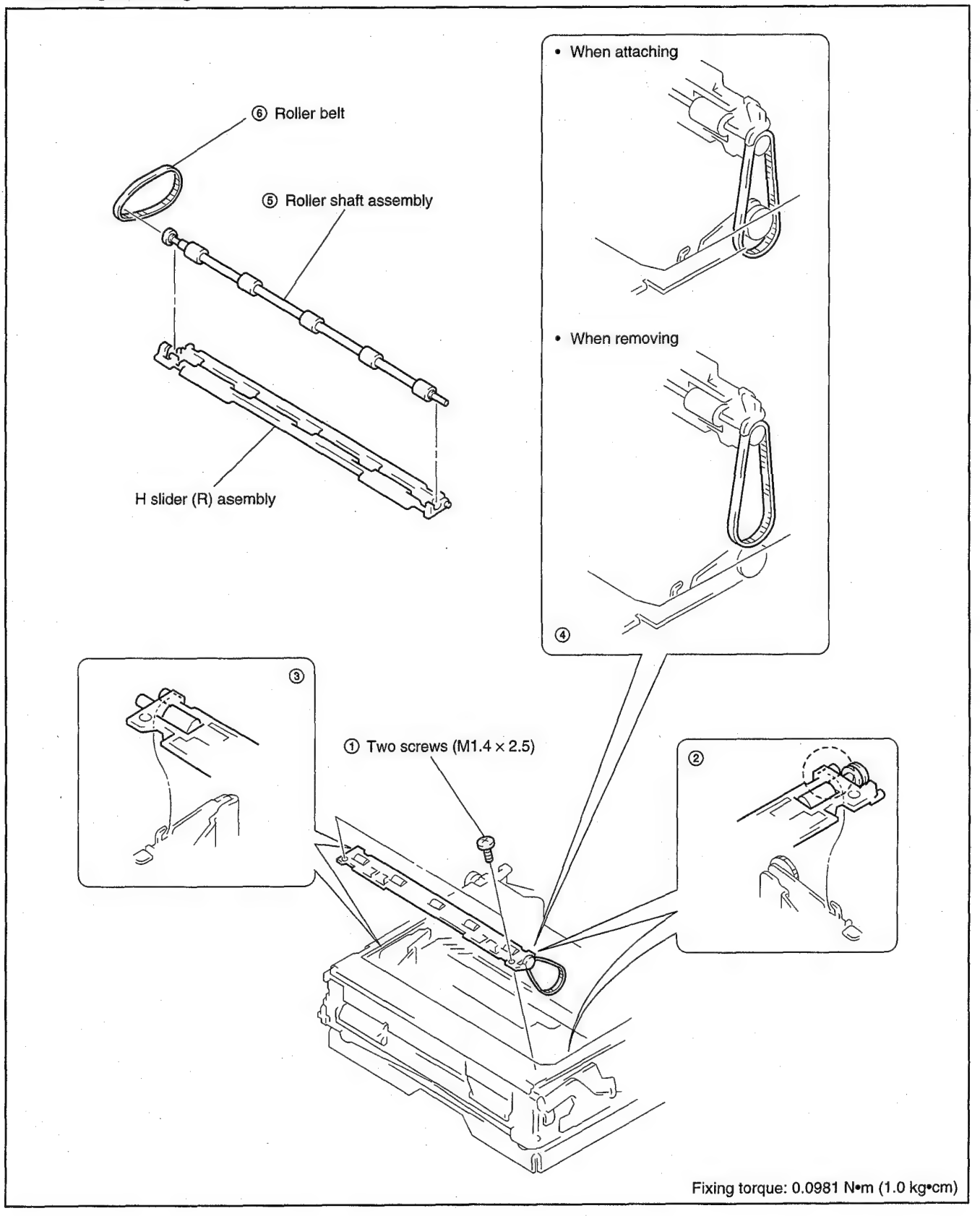
2. Attaching

❶. Attach the parts in the order of ⑧ → ⑩ → ⑨ → ⑦ → ⑥ → ⑤ → ① → ④ → ③ → ②.

❷. Adjust them according to the flowchart (START-1) on page 5-43.

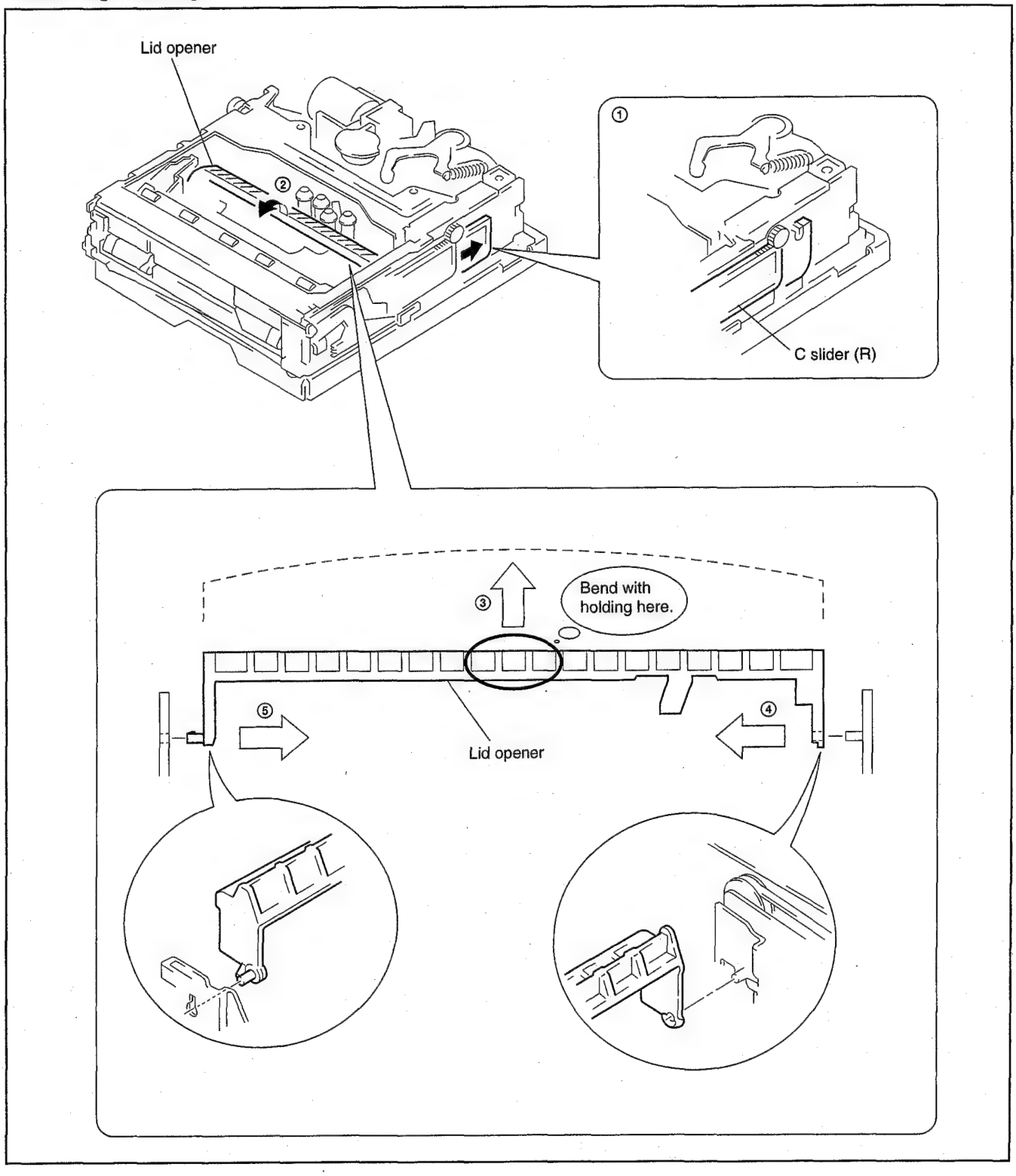
5-33. ROLLER SHAFT ASSEMBLY AND ROLLER BELT

- **Removing/Attaching**



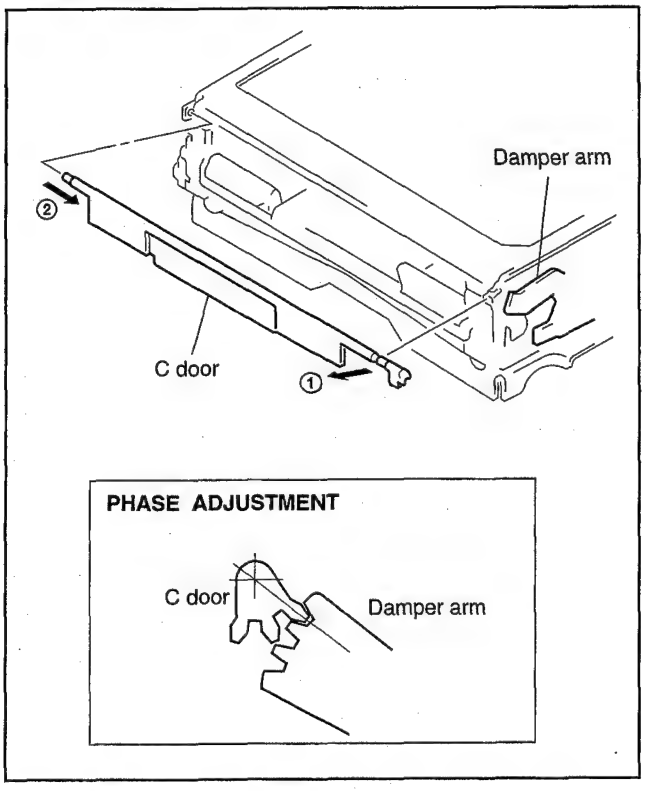
5-34. LID OPENER

- **Removing/Attaching**



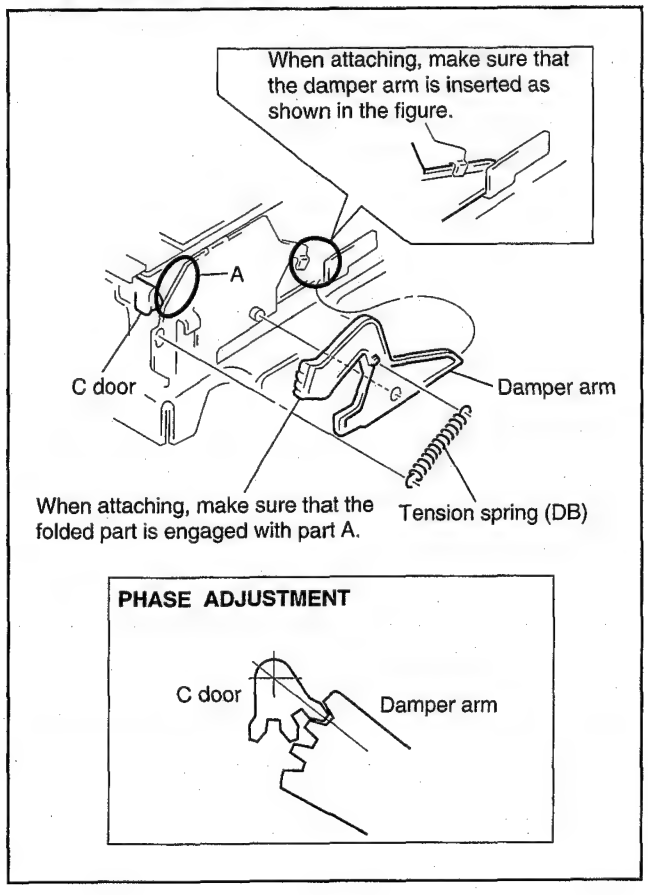
5-35. C DOOR

• **Removing/Attaching**



5-36. DAMPER ARM AND TENSION SPRING (DB)

• **Removing/Attaching**

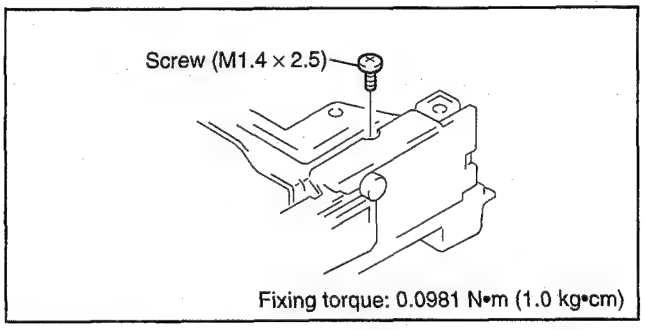


5-37. GEAR (A), GEAR (B) AND C WORM

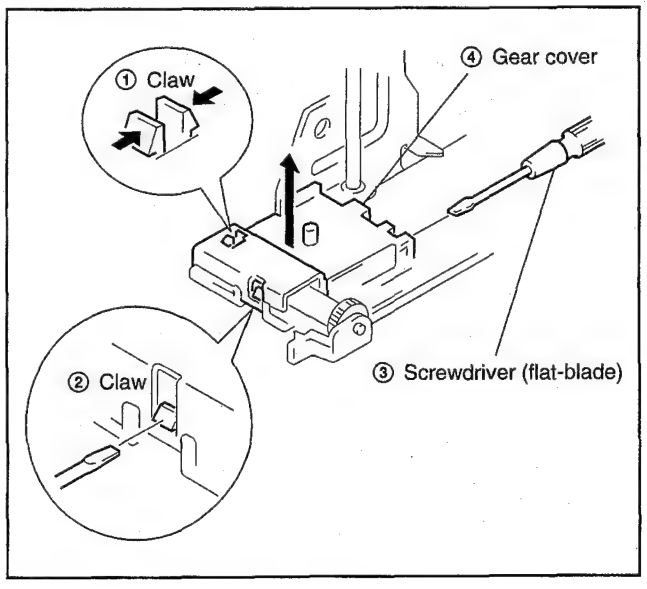
1. Removing

①. FL block assembly. (Refer to page 5-2)

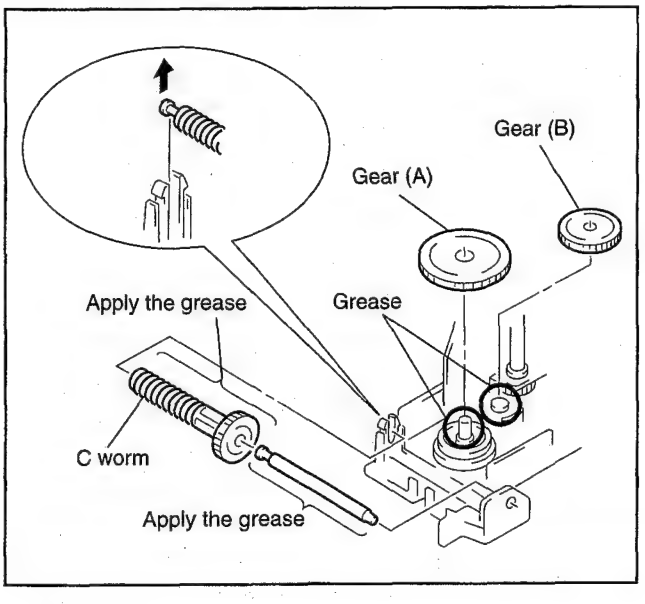
②. Screw. (M1.4 × 2.5)



③. Gear cover.



④. Gear (A), Gear (B) and C worm.

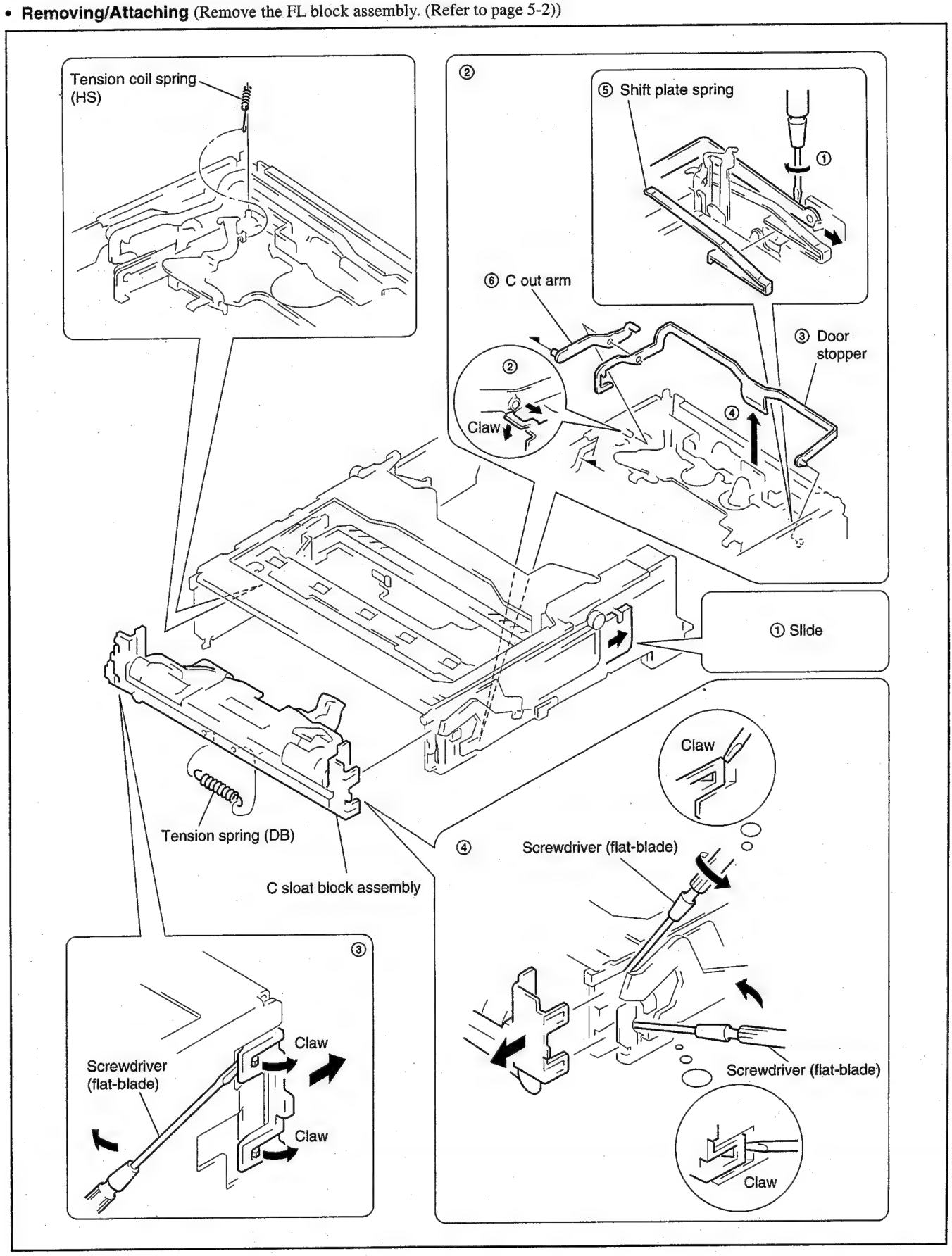


2. Attaching

• Attach the parts in the order of ④ → ③ → ② → ①.

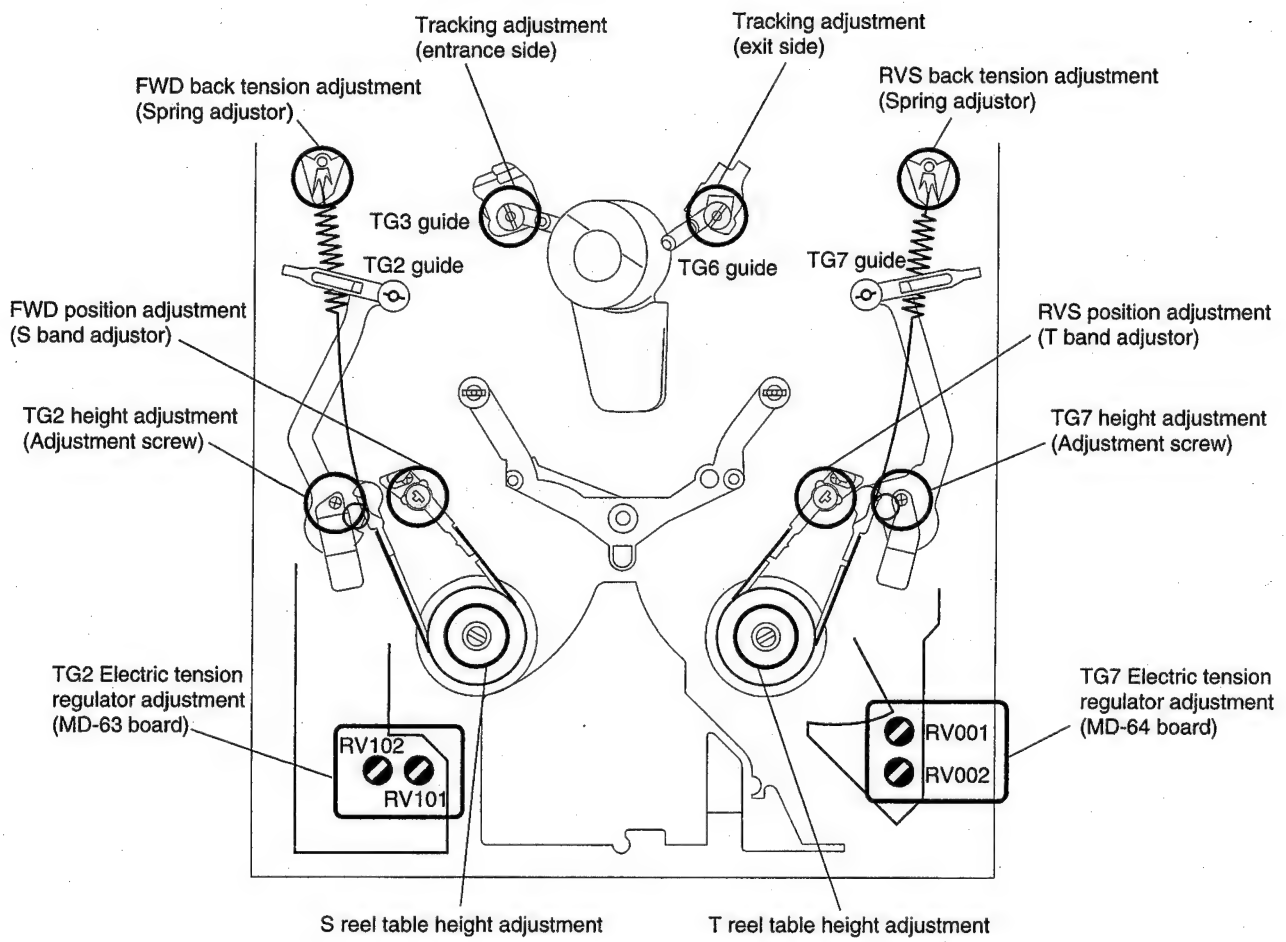
5-38. TENSION COIL SPRING (HS), TENSION SPRING (DB), SHIFT PLATE SPRING AND C SLOAT BLOCK ASSEMBLY

- **Removing/Attaching** (Remove the FL block assembly. (Refer to page 5-2))

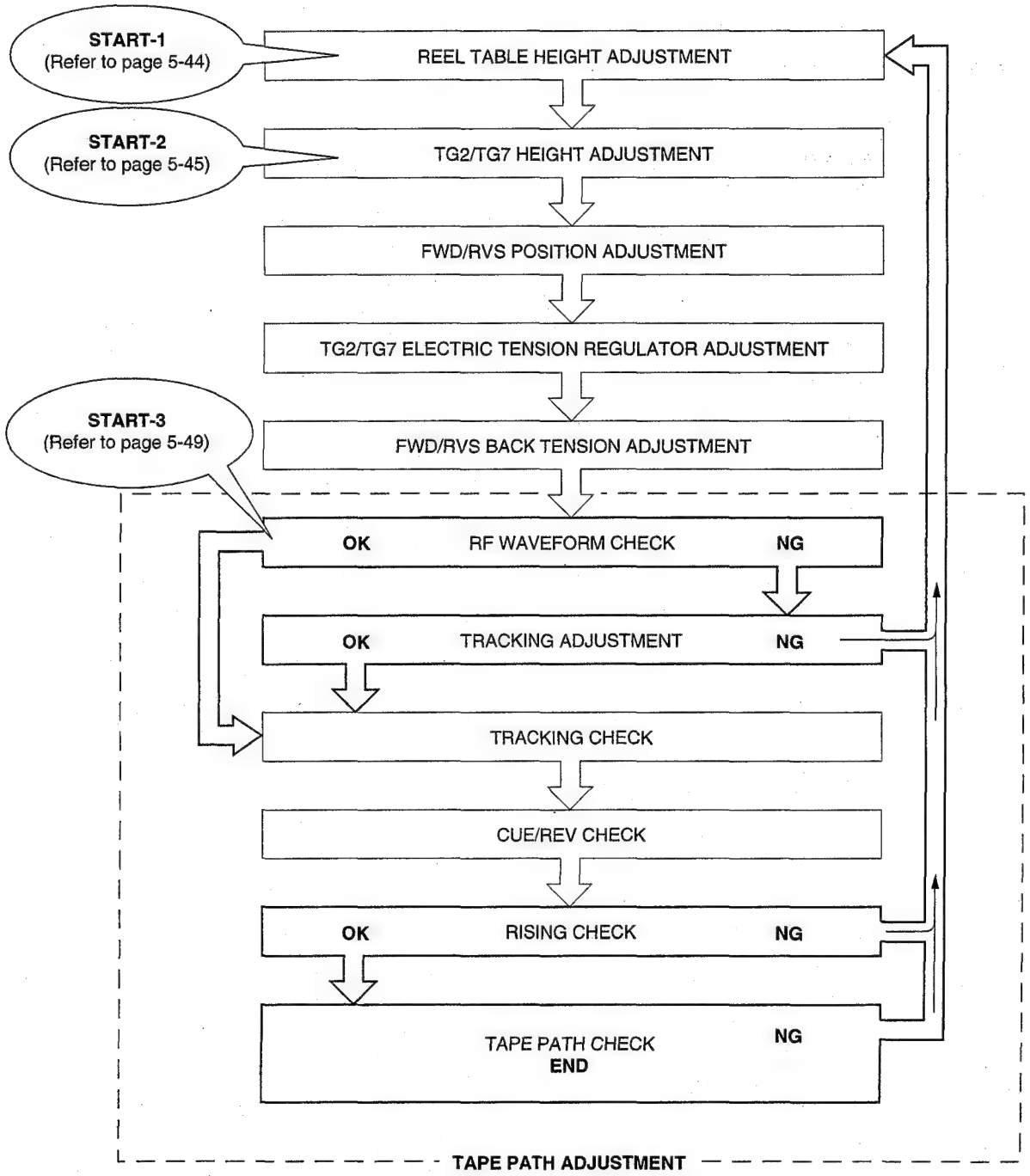


5-1-6. ADJUSTMENTS AND CHECKS

6-1. ADJUSTMENT POSITION



6-2. ADJUSTMENT ORDER



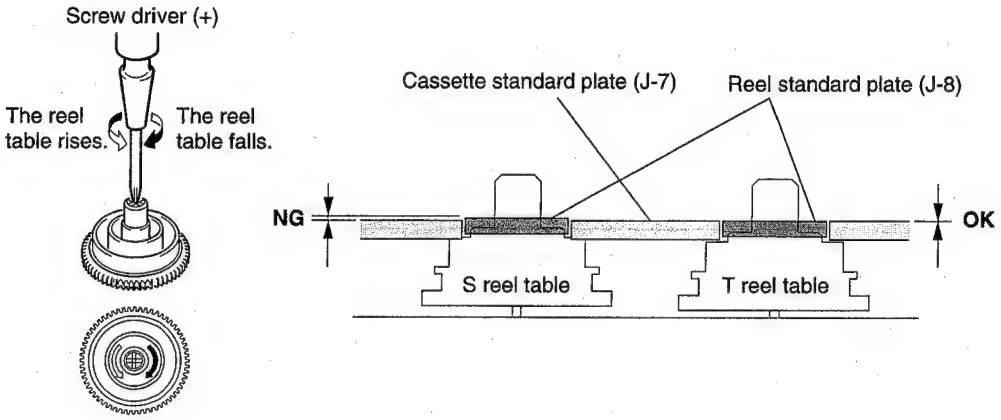
6-3. ADJUSTMENT AND CHECKING METHOD

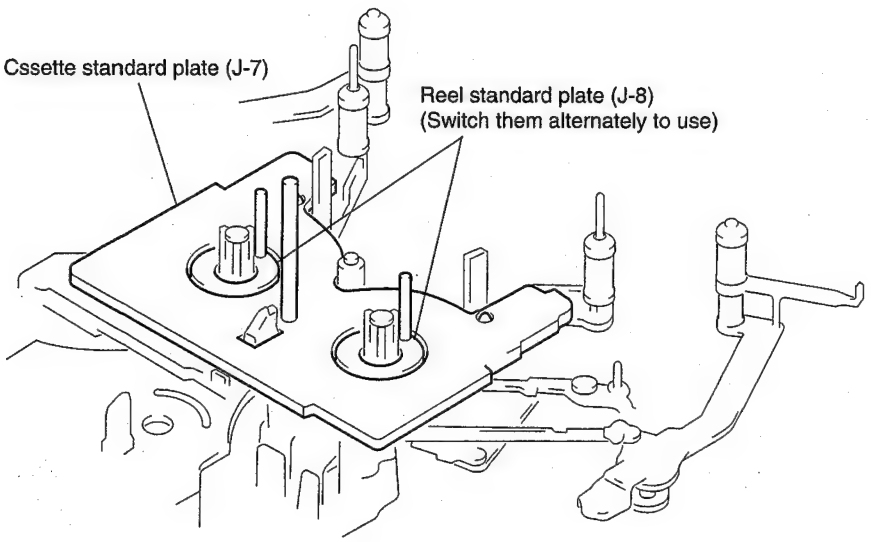
6-3-1. REEL TABLE HEIGHT ADJUSTMENT

1. Preparation before adjustment

FL block: Remove.
Position : (LOADING) / (S cassette)
Jig used : Cassette standard plate (J-7), Reel standard plate (J-8) and screwdriver (+)

2. Adjusting



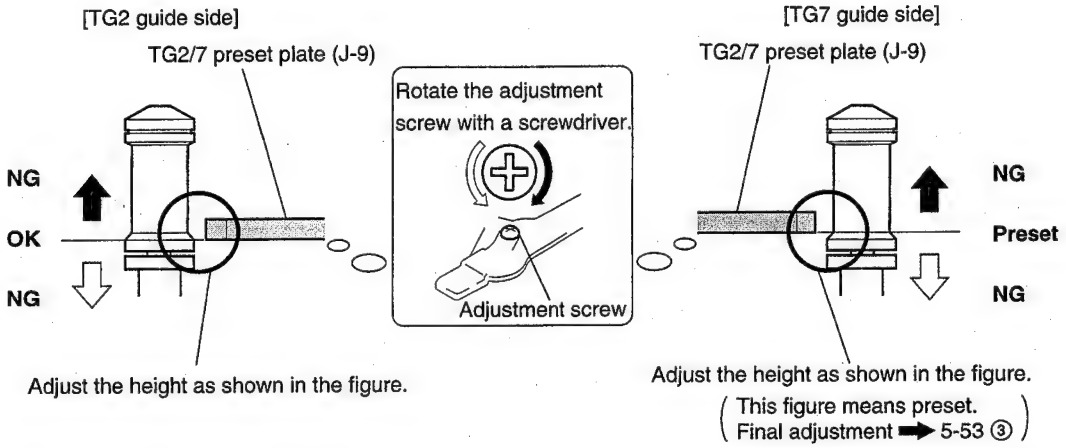


6-3-2. TG2/TG7 HEIGHT ADJUSTMENT

1. Preparation before adjustment

FL block: Remove.
Position : (LOADING) / (S cassette)
Jig used : Cassette standard plate (J-7), TG2/7 preset plate (J-9) and screwdriver
(For attaching jigs, refer to page 5-5)

2. Adjusting

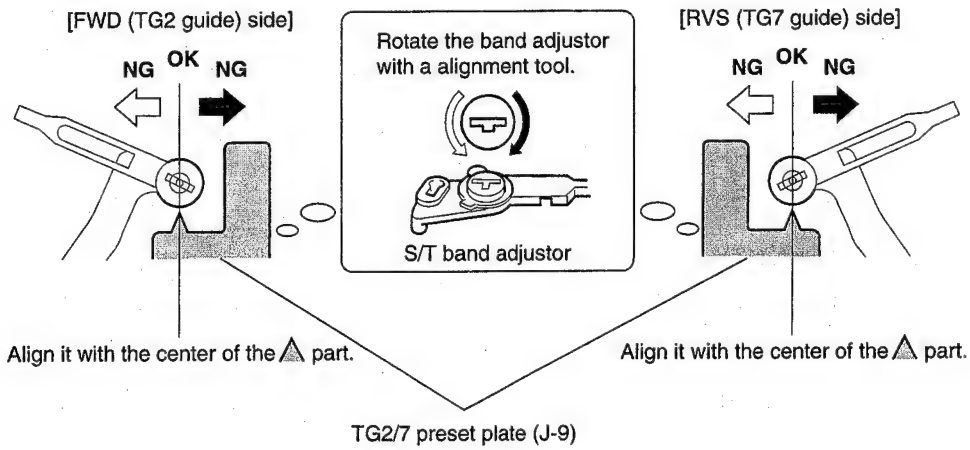


6-3-3. FWD/RVS POSITION ADJUSTMENT

1. Preparation before adjustment

FL block: Remove.
Position : (LOADING (The pinch roller should be stuck)) / (S cassette)
Jig used : Cassette standard plate (J-7), TG2/7 preset plate (J-9) and screwdriver for tape path

2. Adjusting

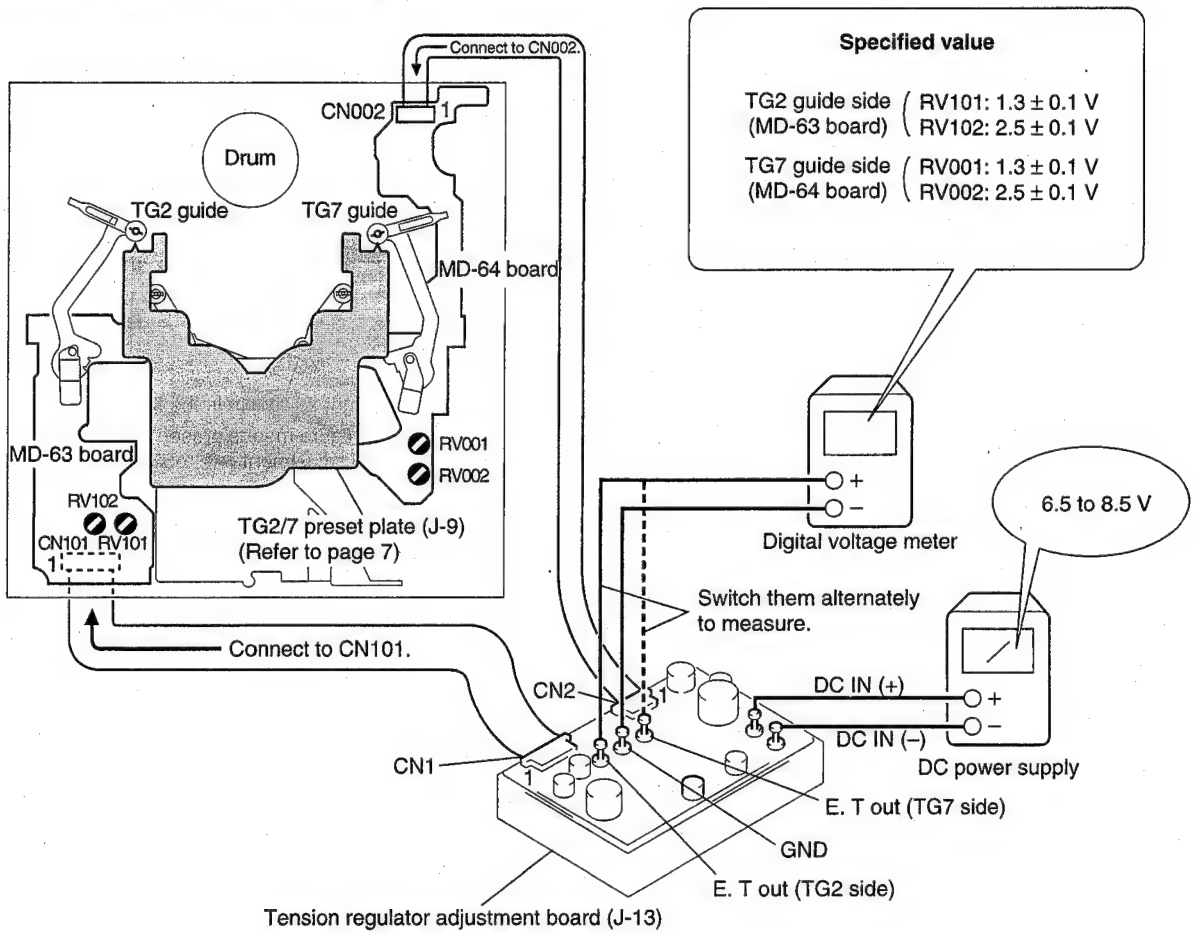


6-3-4. TG2/TG7 ELECTRIC TENSION REGULATOR ADJUSTMENT

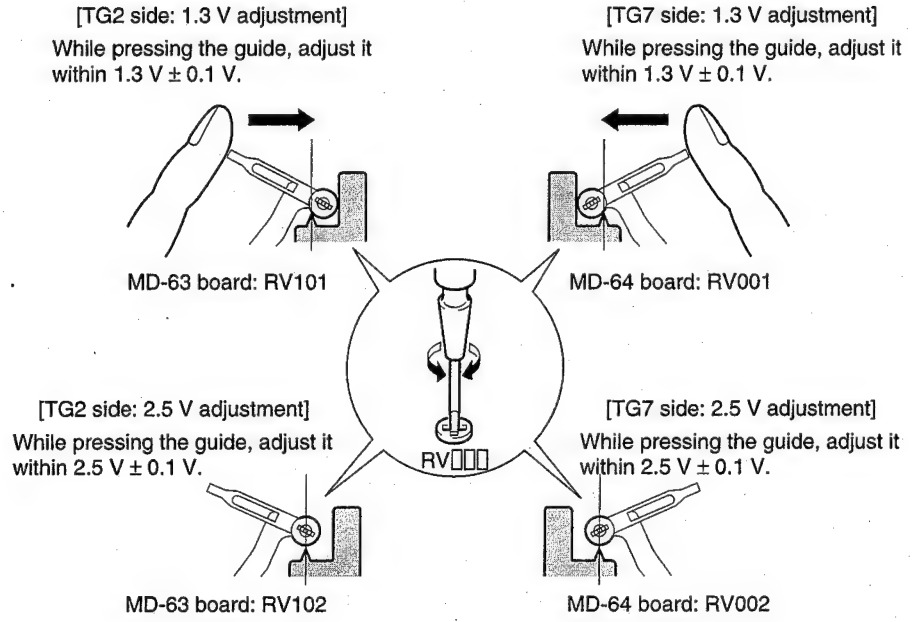
1. Preparation before adjustment

FL block: Remove.
Position : (LOADING (The pinch roller should be stuck)) / (S cassette)
Jig used : Cassette standard plate (J-7), TG2/7 preset plate (J-9) and screwdriver for tape path
(For attaching jigs, refer to page 5-5)

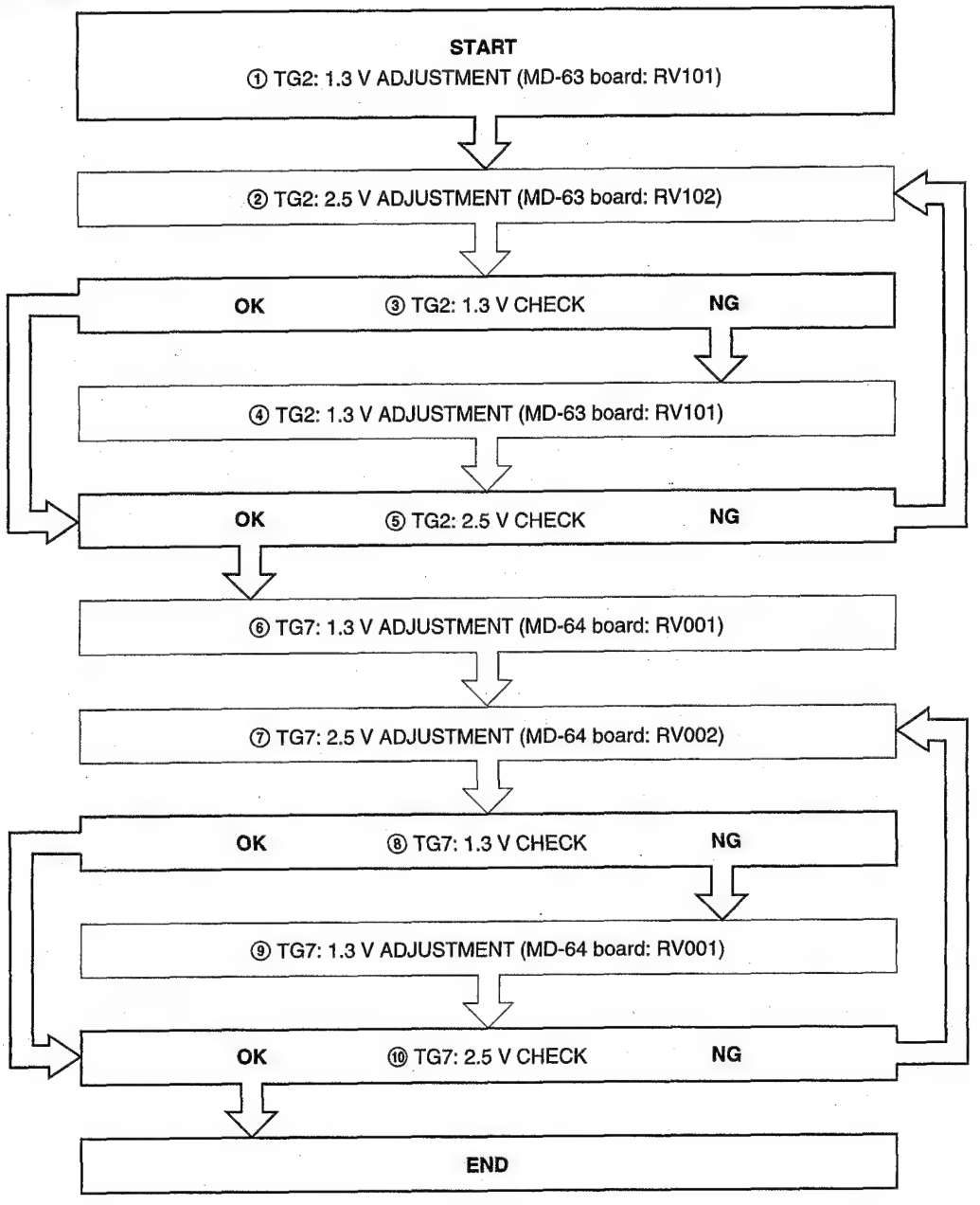
2. Connecting, setting, and adjusting methods



3. Adjusting



4. Adjustment order



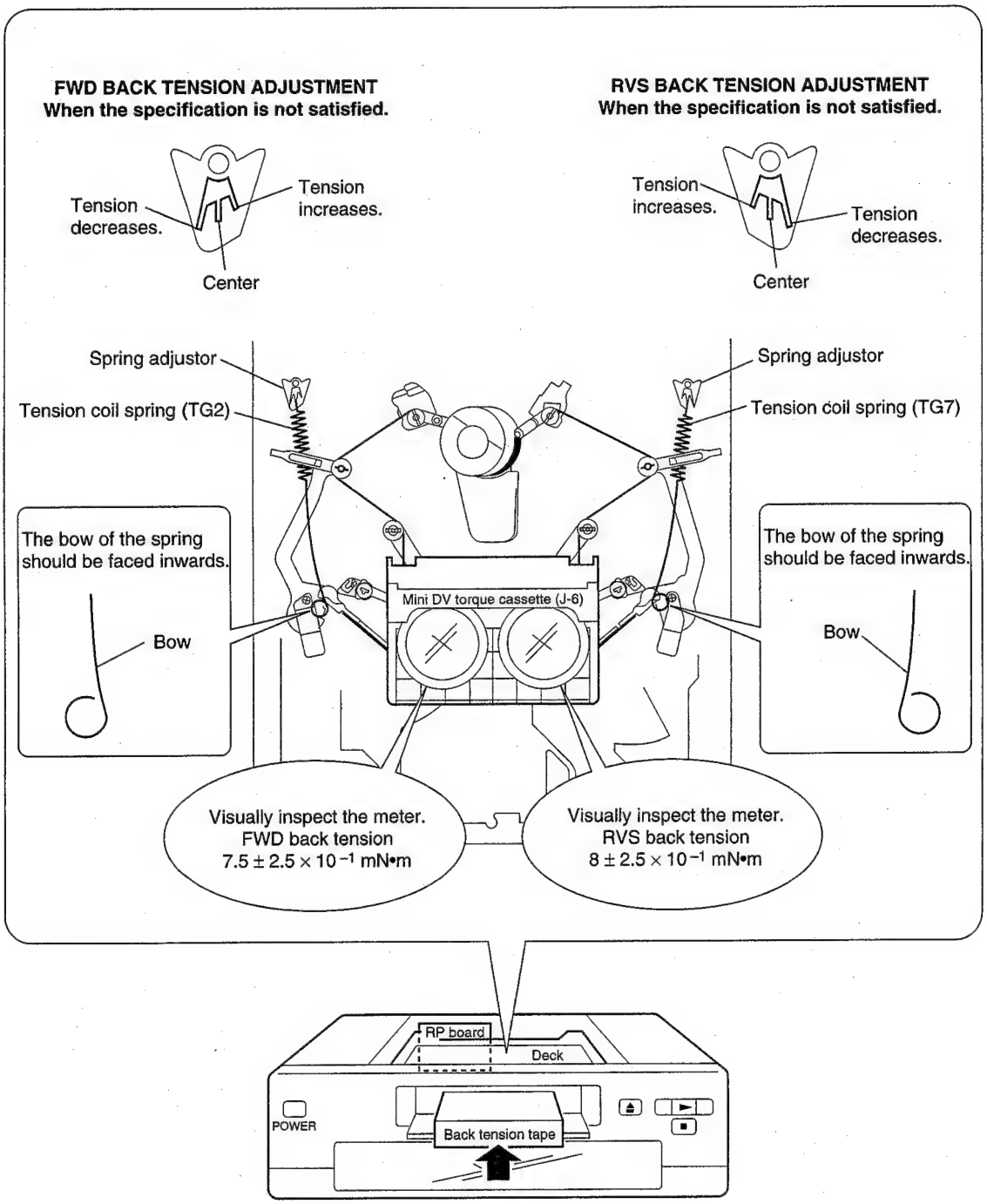
6-3-5. FWD/RVS BACK TENSION ADJUSTMENT

1. Preparation before adjustment

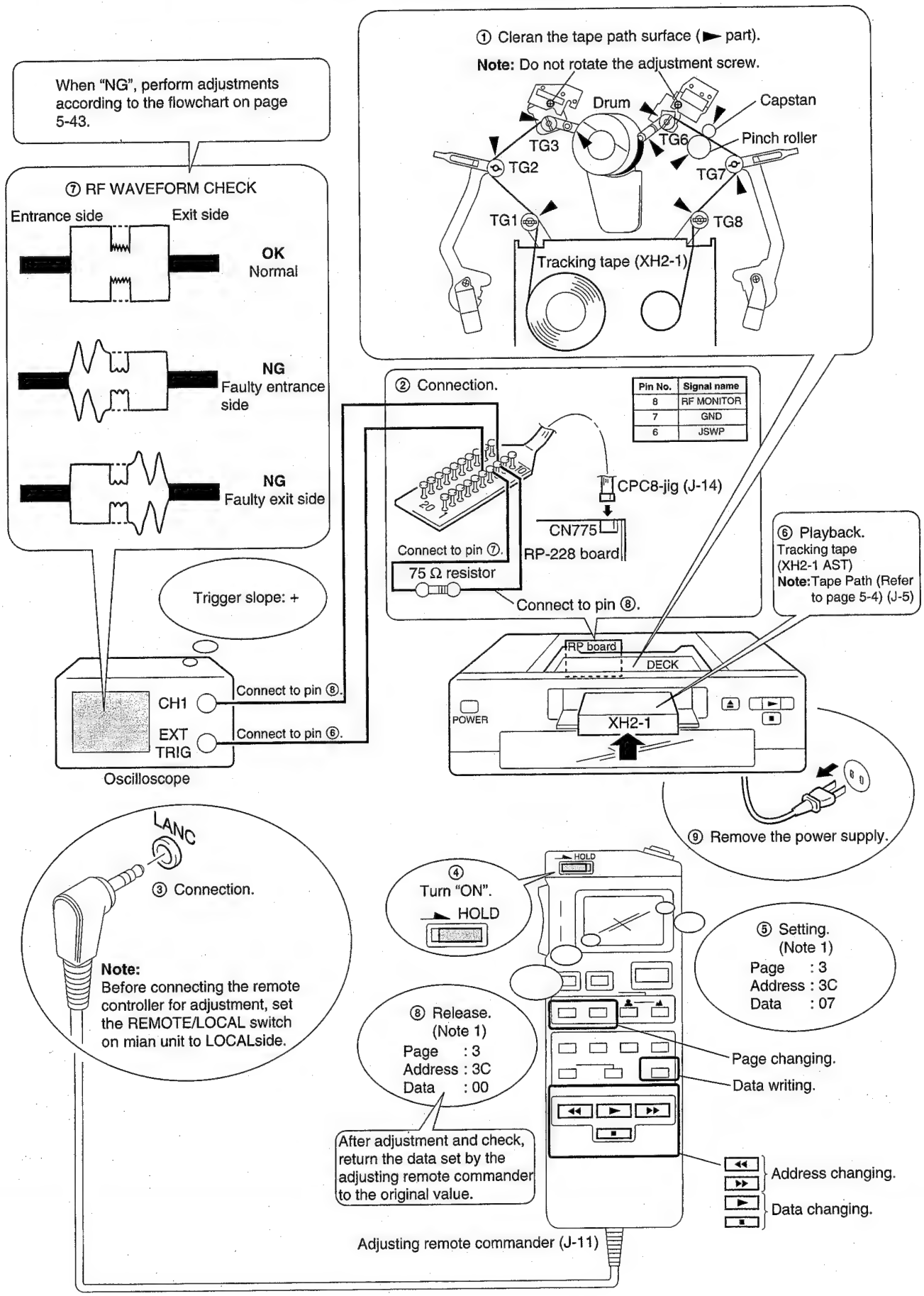
Mechanism deck: Install to the unit.
Jig used : Mini DV torque cassette (J-6), pinset (For change the hooking of spring)

2. Adjusting

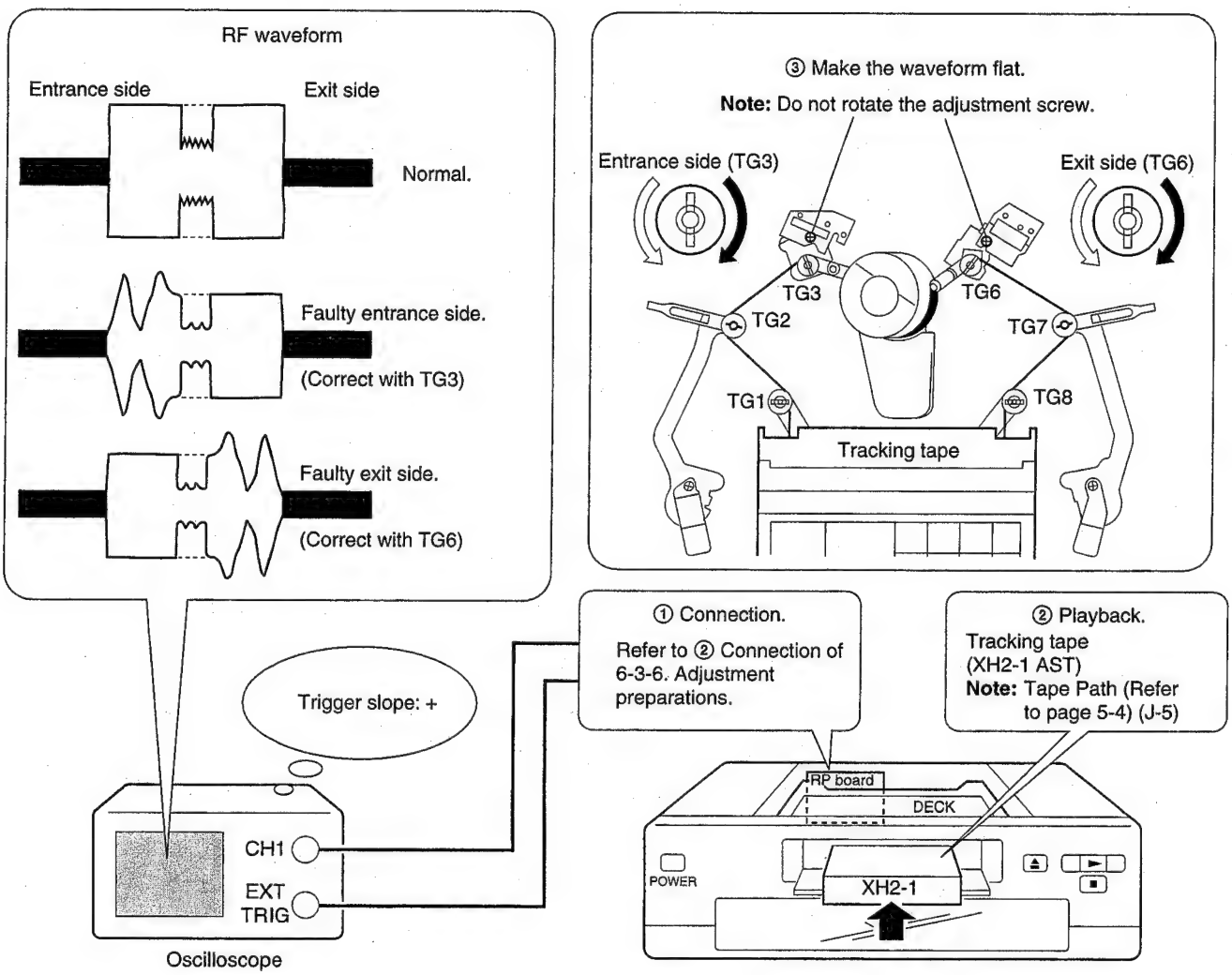
Note: At the FWD (TG2) side, measure the Mini DV torque cassette (J-6) in the FWD mode.
At the RVS (TG7) side, measure the Mini DV torque cassette (J-6) in the RVS mode.



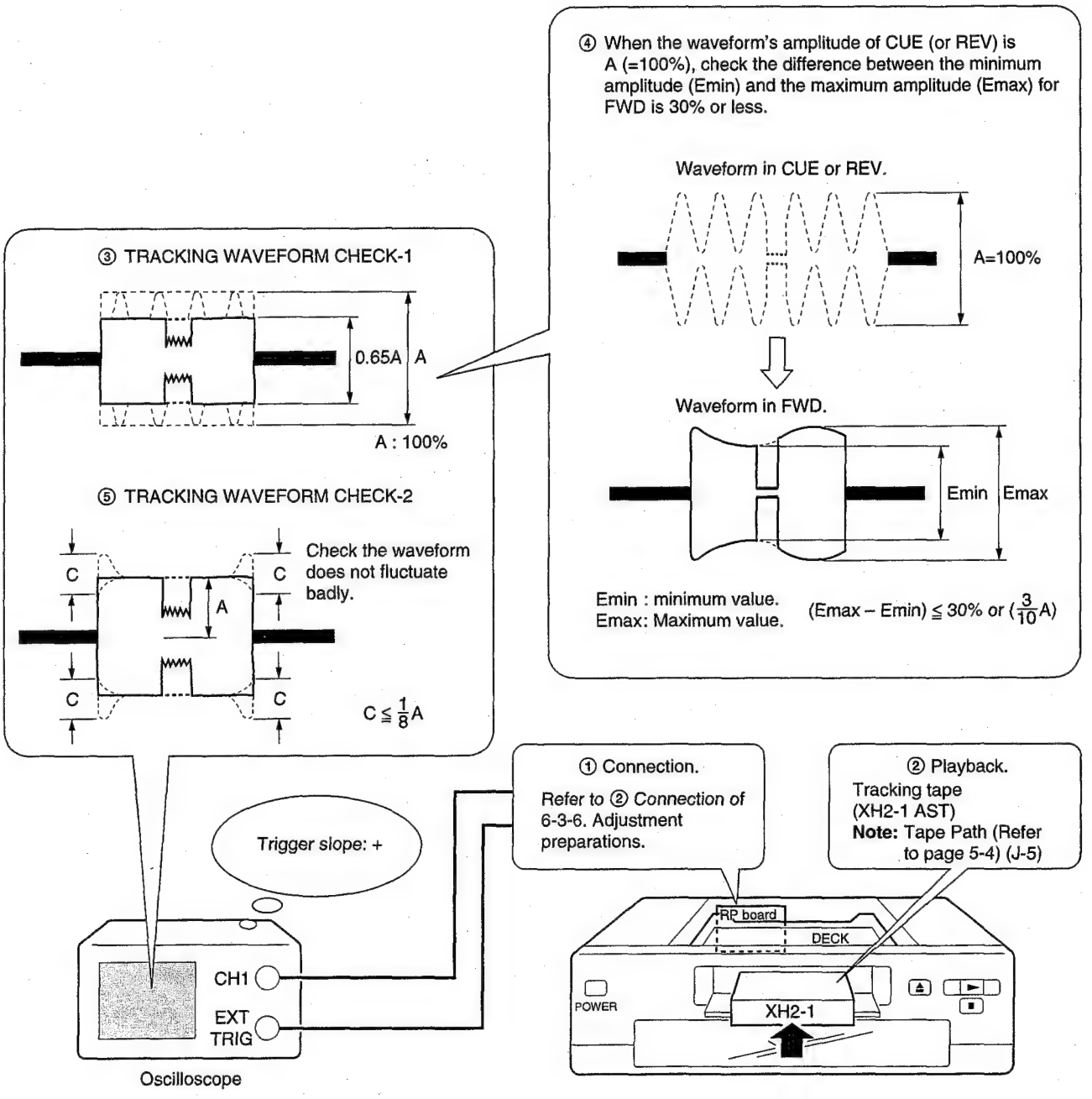
6-3-6. ADJUSTMENT PREPARATIONS AND RF WAVEFORM CHECK



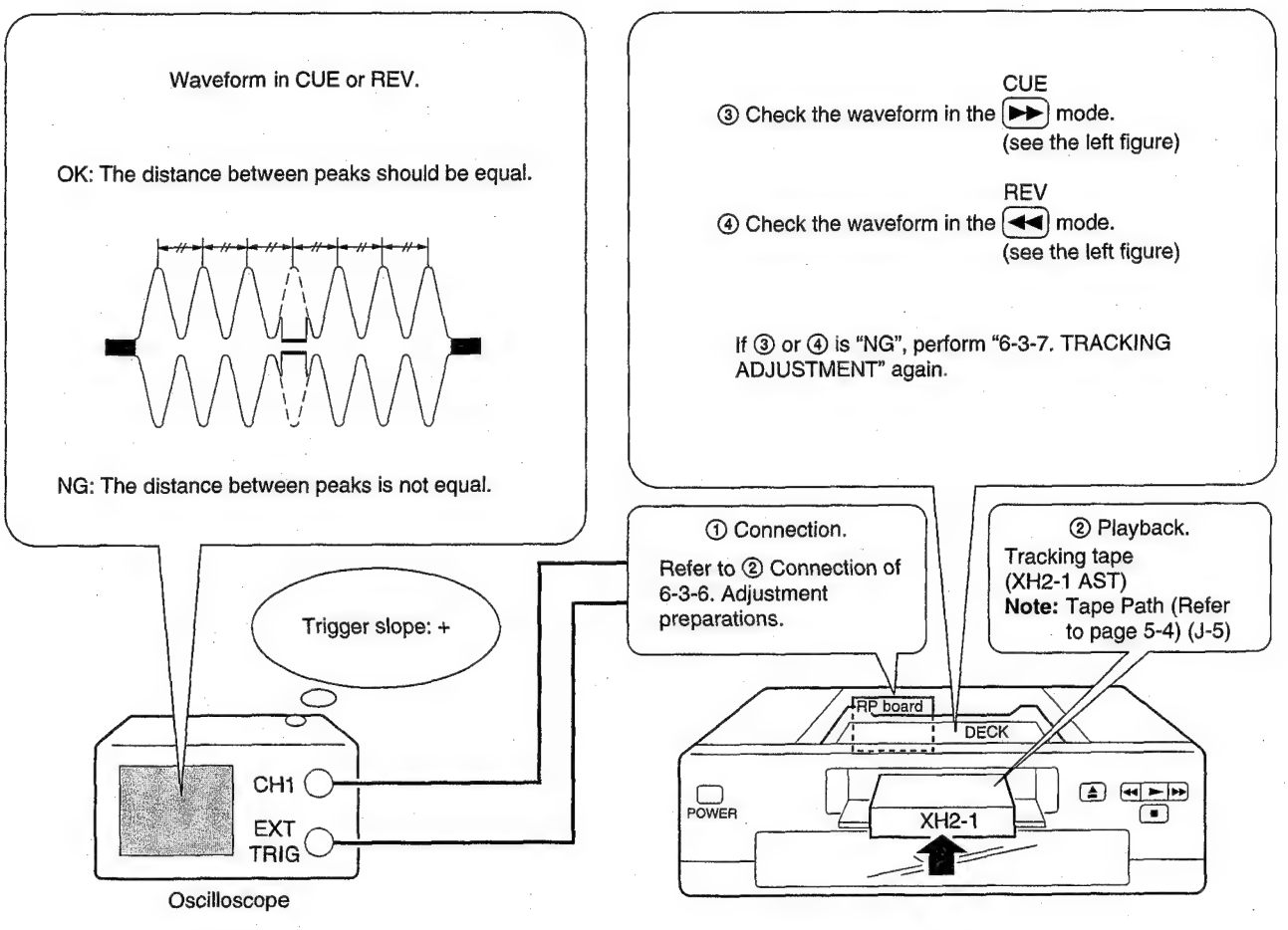
6-3-7. TRACKING ADJUSTMENT



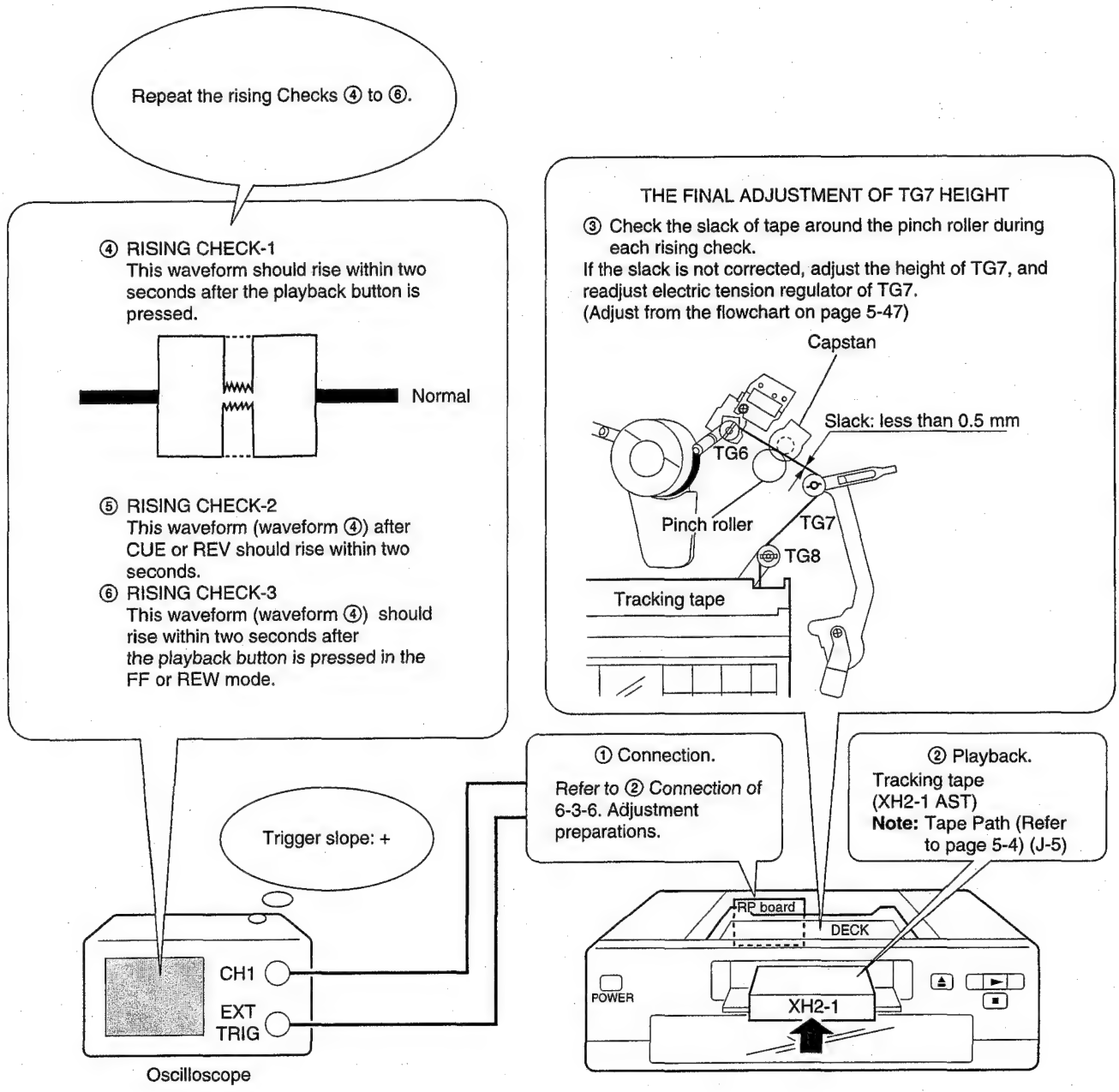
6-3-8. TRACKING CHECK



6-3-9. CUE AND REV CHECK



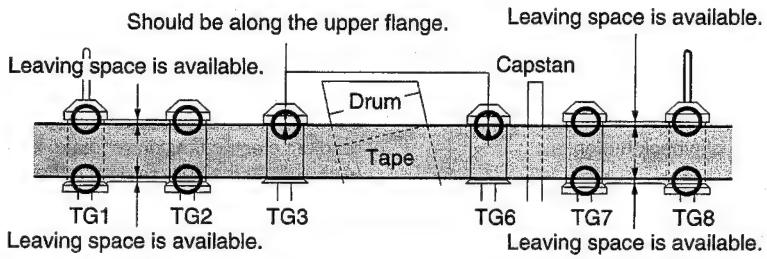
6-3-10. RISING CHECK



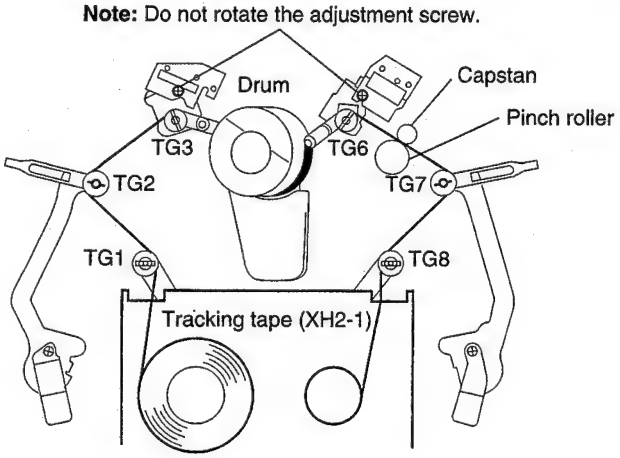
6-3-11. TAPE PATH CHECK

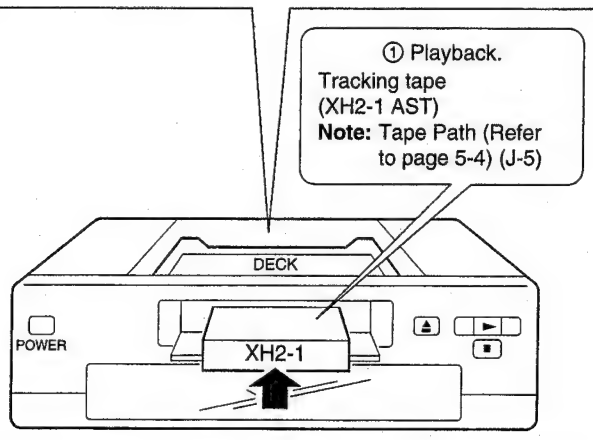
② It will be okayed, if there is no curls at the guides, capstan, etc. (○ part) in the CUE (▶▶) and REV (◀◀) mode.

The following is ideal, but, it is satisfactory if the RF waveform is normal.



Note: Do not rotate the adjustment screw.





③ After adjustment and check, return the data set by the adjusting remote commander to the original value.

5-2. SERVICE MODE

5-2-1. ADJUSTING REMOTE COMMANDER

The adjusting remote commander is used for changing the calculation coefficient in signal processing, EVR data, etc. The adjusting remote commander performs bi-directional communication with the unit using the remote commander signal line (LANC). The resultant data of this bi-directional communication is written in the non-volatile memory.

1. Used Adjustment Remote Commander

1) With the unit set in STANDBY mode, connect the adjusting remote commander to the remote (LANC) terminal.
2) Adjust the HOLD switch of the adjusting remote commander to "HOLD" (SERVICE position).
3) Turn on the power with the ON/STANDBY switch of the unit.

If it has been properly connected, the LCD on the adjusting remote commander will display as shown in Fig. 5-2-1.

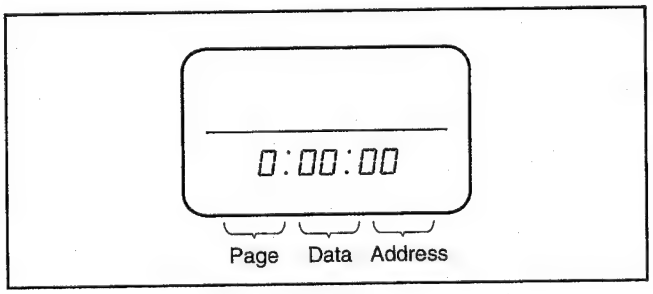


Fig. 5-2-1.

4) Operate the adjusting remote commander as follows.
   - Changing the page
     The page increases when the EDIT SEARCH + button is pressed, and decreases when the EDIT SEARCH – button is pressed. There are altogether 16 pages, from 0 to F.

Hexadecimal notation	0 1 2 3 4 5 6 7 8 9 A B C D E F
LCD Display	0 1 2 3 4 5 6 7 8 9 A b c d E F
Decimal notation conversion value	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Table 5-2-1.

   - Changing the address
     The address increases when the FF (▶▶) button is pressed, and decreases when the REW (◀◀) button is pressed. There are altogether 256 addresses, from 00 to FF.
   - Changing the data (Data setting)
     The data increases when the PLAY (▶) button is pressed, and decreases when the STOP (■) button is pressed. There are altogether 256 data, from 00 to FF.
   - Writing the adjustment data
     The PAUSE button must be pressed to write the adjustment data (C page, D page and E page) in the nonvolatile memory. (The new adjustment data will not be recorded in the non-volatile memory if this step is not performed.)

2. Precautions Upon Using The Adjusting Remote Commander

Mishandling of the adjusting remote commander may erase the correct adjustment data at times. To prevent this, it is recommended that all adjustment data be noted down before beginning adjustments and new adjustment data after each adjustment.

5-2-2. DATA PROCESSING

The calculation of the adjusting remote commander display data (hexadecimal notation) are required for obtaining the adjustment data of some adjustment items. In this case, after converting the hexadecimal notation to decimal notation, calculate and convert the result to hexadecimal notation, and use it as the adjustment data. Table 5-2-2. indicates the hexadecimal notation- the decimal notation, calculation table.

Hexadecimal nontation-Decimal notation

The lower digits of the hexadecimal notation / The upper digits of the hexadecimal notation	0	1	2	3	4	5	6	7	8	9	A (A)	B (b)	C (c)	D (d) ②	E (E)	F (F)
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
8	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
9	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
A (A)	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
①→ B (b)	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
C (c)	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
D (d)	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
E (E)	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
F (F)	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

Note : ( ) indicate the adjusting remote control unit display.

(Example) In the case that the adjusting remote control unit display are BD (bd).
As the upper digit of the hexadecimal notation is B (b), and the lower digit is D (d), the intersection "189" of the ① and ② in the above table is the decimal notation to be calculated.

Table 5-2-2.

5-2-3. SERVICE MODE

1. Emergence Memory Address

Page C	Addresses 30 to 3B

Address	Contents
30	EMG code when first error occurs
32	Upper: MSW code when shift starts when first error occurs Lower: MSW code when first error occurs
33	Lower: MSW code to be moved when first error occurs
34	EMG code when second error occurs
36	Upper: MSW code when shift starts when second error occurs Lower: MSW code when second error occurs
37	Lower: MSW code to be moved when second error occurs
38	EMG code when last error occurs
3A	Upper: MSW code when shift starts when last error occurs Lower: MSW code when last error occurs
3B	Lower: MSW code to be moved when last error occurs

When no error occurs in the unit, data 00 is written in the above addresses (30 to 3B). When the first error occurs in the unit, the data corresponding to the error is written in the first emergency address (30 to 33). In the same way, when the second error occurs, the data corresponding to the error is written in the second emergency address (34 to 37).
Finally, when the last error occurs, the data corresponding to the error is written in the last emergency address (38 to 3B). Consequently, addresses 30 to 3B are updated each time errors occur.

Note 1: After completing adjustments, be sure to rewrite the data of addresses 30 to 3B to 00.

1) Select page: 0, address: 01, and set data: 01.
2) Select page: C, address: 30, set data: 00, and press the PAUSE button of the adjusting remote commander.
3) Select page: C, address: 31, set data: 00, and press the PAUSE button of the adjusting remote commander.
4) Select page: C, address: 32, set data: 00, and press the PAUSE button of the adjusting remote commander.
5) Select page: C, address: 33, set data: 00, and press the PAUSE button of the adjusting remote commander.
6) Select page: C, address: 34, set data: 00, and press the PAUSE button of the adjusting remote commander.
7) Select page: C, address: 35, set data: 00, and press the PAUSE button of the adjusting remote commander.
8) Select page: C, address: 36, set data: 00, and press the PAUSE button of the adjusting remote commander.
9) Select page: C, address: 37, set data: 00, and press the PAUSE button of the adjusting remote commander.
10) Select page: C, address: 38, set data: 00, and press the PAUSE button of the adjusting remote commander.
11) Select page: C, address: 39, set data: 00, and press the PAUSE button of the adjusting remote commander.
12) Select page: C, address: 3A, set data: 00, and press the PAUSE button of the adjusting remote commander.
13) Select page: C, address: 3B, set data: 00, and press the PAUSE button of the adjusting remote commander.
14) Select page: 0, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.

1-1. EMG Code (Emergency Code)

Codes corresponding to the errors which occur are written in addresses 30, 34, 38. The type of error indicated by the code are shown in the following table.

Code	Error Type
00	No error (Initial state)
10	Loading motor time-out during LOAD
11	Loading motor time-out during UNLOAD
20	Reel motor error
22	T reel error
23	S reel error
24	Swing error
32	Error during normal capstan rotation
33	Cassette compartment LOAD error
35	Cassette compartment UNLOAD error
40	FG error during drum start-up
42	FG error during normal drum rotation
50	DEW detection
52	Wet DEW detection
60	Electrical tension regulator error

5-3. VIDEO SECTION ADJUSTMENTS

When performing adjustments, refer to the layout diagrams for adjustment related parts on page 5-92.

3-1. PREPARATIONS BEFORE ADJUSTMENT

3-1-1. Equipment Used

1) TV monitor
2) Oscilloscope with 2-phenomenon, 30 MHz band, and delay mode (Unless specified otherwise, use a 10 : 1 probe)
3) Frequency counter
4) Digital voltmeter
5) Audio generator
6) Audio level meter
7) Audio distortion meter
8) Audio attenuator
9) Pattern generator (with VIDEO OUTPUT terminal and external sync function)
10) Digital camera recorder
    NTSC : DCR-VX1000
    PAL : DCR-VX1000E
11) Vectorscope
12) Alignment tape
    - SW/OL reference (XH2-3)
      Parts code: 8-967-997-11
    - Audio operation check for NTSC (XH5-3)
      Parts code: 8-967-997-51
    - System operation check for NTSC (XH5-5)
      Parts code: 8-967-997-61
    - Audio operation check for PAL (XH5-3P)
      Parts code: 8-967-997-55
    - System operation check for PAL (XH5-5P)
      Parts code: 8-967-997-66
    - BIST check for NTSC (XH5-6)
      Parts code: 8-967-997-71
    - BIST check for PAL (XH5-6P)
      Parts code: 8-967-997-76
13) Adjusting remote control unit (J-6082-053-B)
14) Multi CPC-8 jig (J-6082-388-A). (CN775 of the RP-228 board)
15) Extension board
    - For extension between CN101 of the RP-228 board and CN412 of the JC-19 board.
    - For extension between CN102 of the RP-228 board and CN411 of the JC-19 board. (30P, 0.5 mm) (J-6082-270-A)
    - For extension between CN771 of the RP-228 board and drum (M901) (10P, 1 mm) (J-6082-064-A)
    - For extension between CN002 of the CM-56 board and CN501 of the VA-102 board (8P, 1 mm) (J-6082-058-A)
    - For extension between CN006 of the CM-56 board and the reel motor (M904) (15P, 1.25 mm) (J-6902-354-A)
    - For extension between CN001 of the CM-56 board and CN101 of the MD-63 board (16P, 1 mm) (J-6082-020-A)

NTAC : DSR-40
PAL : DSR-40P

3-1-2. Connection of Equipment

According to the specification for the input terminal (S VIDEO input, VIDEO input, or DV input), connect measuring equipment as shown in Fig. 5-3-1, and make adjustment.
The input terminal is specified in ( ) of the signal column.
Any input terminal can be used unless otherwise specified.
To switch between S VIDEO INPUT and VIDEO INPUT, use the VIDEO SELECT button on the front panel.

Note 1: In adjustments specifying for the S VIDEO input to be used, using the VIDEO input would disable the product specifications of this unit from being satisfied. Always use the input signal specified.

Note 2: If adjustments are used with the VTR with the S video output terminal as the signal source, the performance of this unit may be affected by the VTR. Use a pattern generator with a Y/C separator terminal as much as possible.

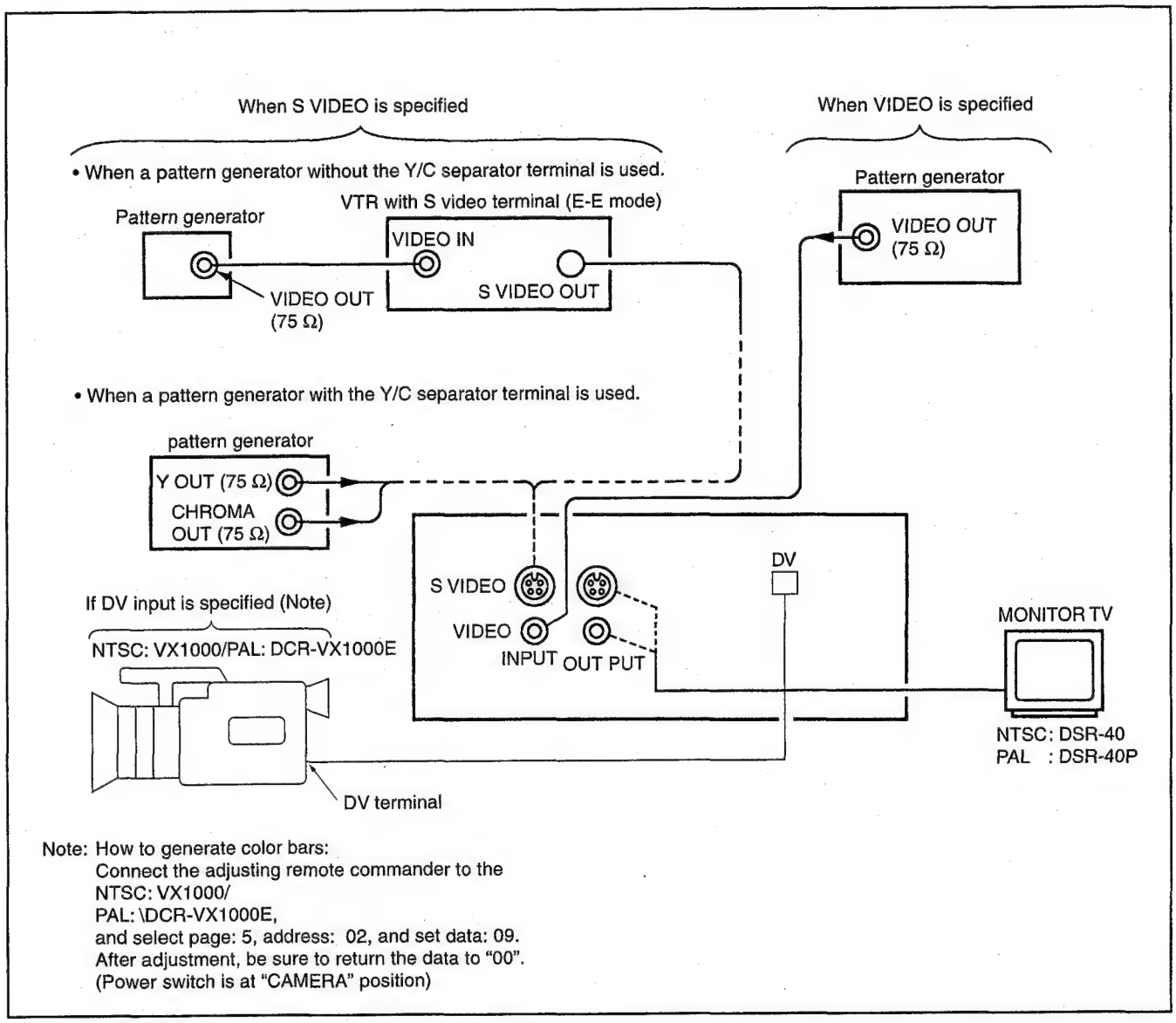


Fig. 5-3-1.

3-1-3. Adjusting Connectors (RP-228 Board CN775)

Some of the adjusting points of the video section are concentrated at CN775 of the RP-228 board. Connect the instruments via the multi CPC-8 jig (J-6082-388-A)

Pin No.	Signal Name	Pin No.	Signal Name
1	TCK	2	TMS
3	TDI	4	GND
5	TRACK ID	6	JSWP
7	GND	8	RF MONITOR
9	VCC2	10	AGC IN
11	VCC1	12	EQ IN
13	LOCK	14	REF OUT
15	ENV OUT	16	GND
17	TDO	18	C1ERP
19	FLTD	20	GND

Table 5-3-1.

3-1-4. Checking the Input Signals

Because the video signal obtained from the pattern generator is used as the adjustment signal for adjustments, the video output signal must satisfy the given specifications.

1. S VIDEO Input

Connect the oscilloscope to the Y signal terminal of the S VIDEO input terminal, and check that the sync signal of the Y signal is approximately <0.286> [0.30] V and that the amplitude of the video section is approximately <0.714> [0.70] V. (When a VTR with the S VIDEO output terminal is used, also check that the chroma signal and burst signal have not remained)

Connect the oscilloscope to the chroma signal terminal of the S VIDEO input terminal, and check that the burst signal amplitude of the chroma signal is approximately <0.286> [0.30] V and flat, and that the red signal amplitude of the chroma signal is approximately <0.66> [0.67] V. The Y and chroma signals used in the adjustment are shown in Fig. 5-3-2.

< >: NTSC model
[ ]: PAL model

2. VIDEO Input

Connect the oscilloscope to the VIDEO input terminal, and check that the sync signal amplitude of the video signal is approximately <0.286> [0.30] V, the amplitude of the video section is approximately <0.714> [0.70] V, the amplitude of the burst signal is approximately <0.286> [0.30] V and flat, and that the red signal amplitude of the chroma signal is approximately <0.66> [0.67] V. The video signal (color bar) used for adjustments is shown in Fig. 5-3-3.

< >: NTSC model
[ ]: PAL model

NTAC : DSR-40
PAL : DSR-40P

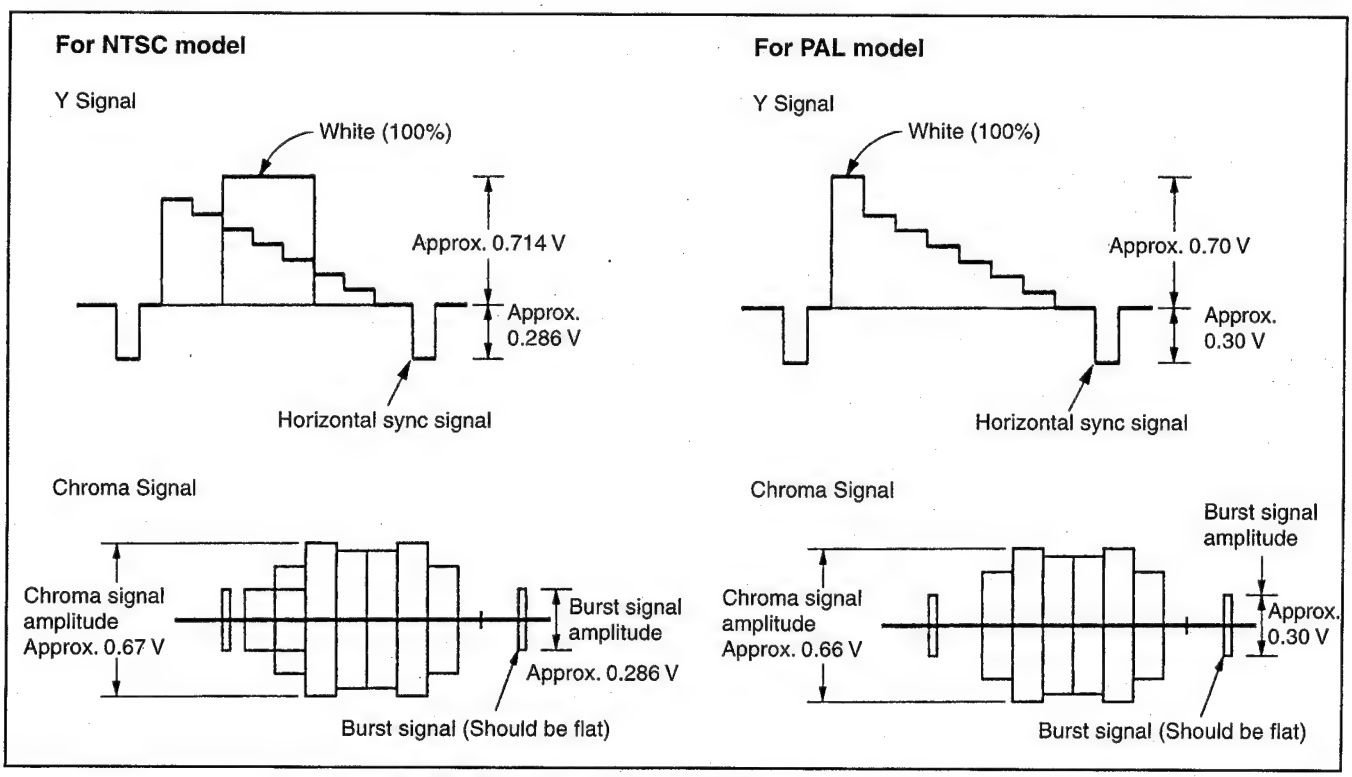


Fig. 5-3-2. Color Bar Signal of Pattern Generator

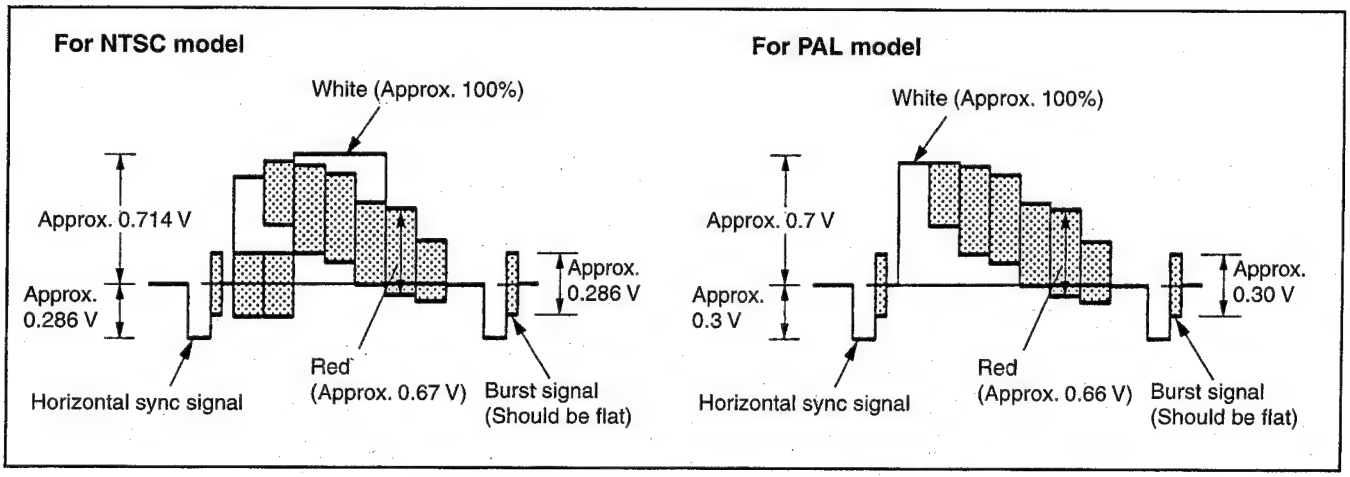


Fig. 5-3-3. Color Bar Signal of Pattern Generator

3-1-5. Adjustment Tapes

Use the alignment tapes shown in the following table.
Use tapes specified in the signal column of each adjustment.

Name	Use
SW/OL standard (XH2-3)	Switching position adjustment
Audio operation check (XH5-3 (NTSC), XH5-3P (PAL))	Audio system adjustment
System operation check (XH5-5 (NTSC), XH5-5P (PAL))	Operation check
BIST check (XH5-6 (NTSC), XH5-6P (PAL))	BIST check

Table 5-3-2.

Fig. 5-3-4. shows the 75% color bar signals recorded on the alignment tape for Audio Operation Check (NTSC).

Note : Measure with video terminal (Terminated at 75 Ω)

NTAC : DSR-40
PAL : DSR-40P

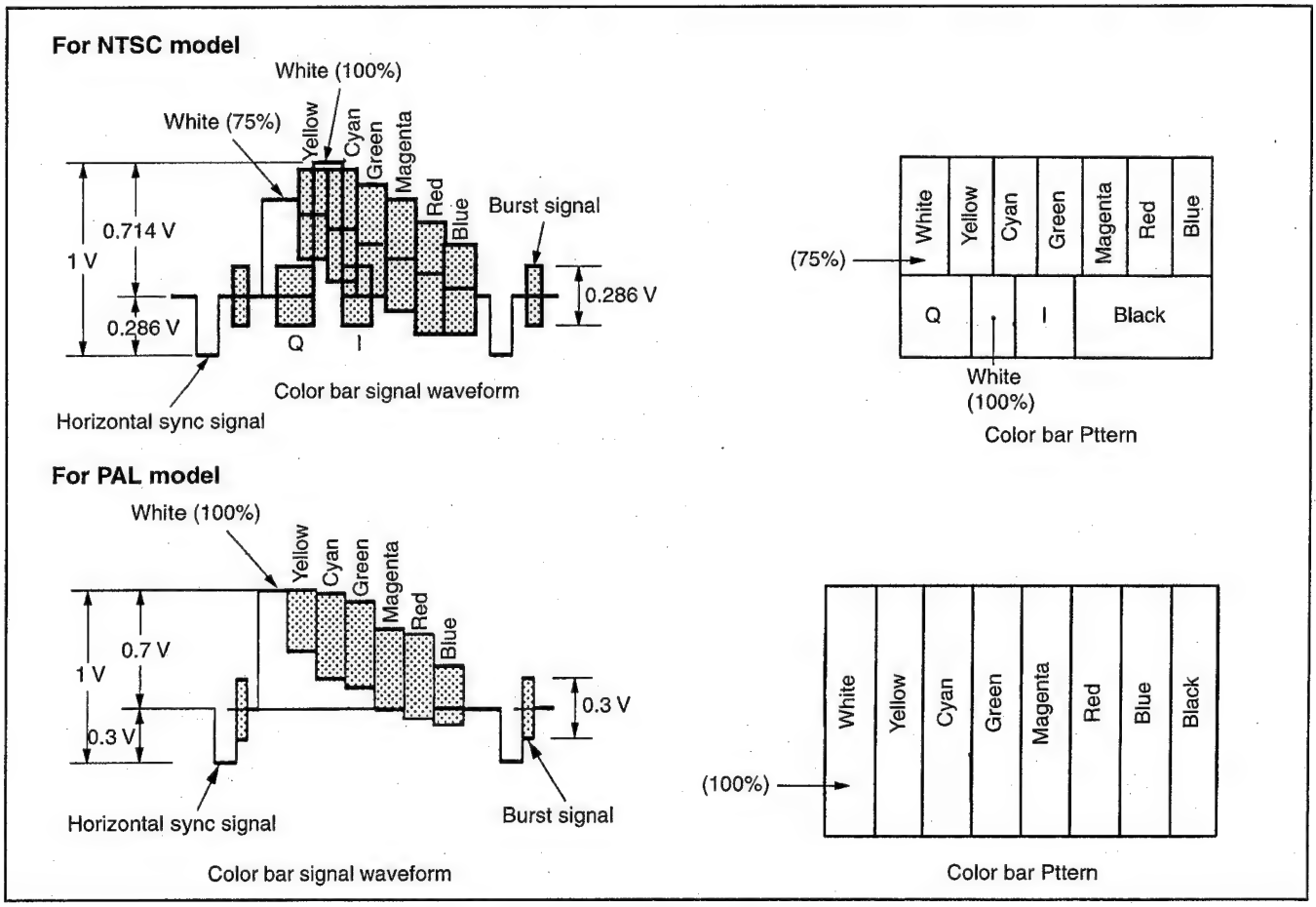


Fig. 5-3-4. *Color Bar Signal of Alignment Tapes*

3-1-6. Input/ Output Level and Impedance

INPUT S VIDEO: Mini DIN 4-pin
Luminance signal: 1 Vp-p (75 ohms unbalanced)
Chrominance signal: 0.286 Vp-p (DSR-40)
0.3 Vp-p (DSR-40P)
(75 ohms unbalanced)
VIDEO: BNC type
Input signal: 1 Vp-p (75 ohms unbalanced)
AUDIO: Phono jack (L, R)
Input level: 2 Vrms (full bit)
Input impedance: more than 47 kohms

MONITOR VIDEO: BNC type
Output signal: 1 Vp-p (75 ohms unbalanced)
AUDIO CH1/3: Phono jack
Output level: 2 Vrms (full bit)
Output impedance: less than 10 kohms
AUDIO CH2/4: Phono jack
Output level: 2 Vrms (full bit)
Output impedance: less than 10 kohms

OUTPUT S VIDEO: Mini DIN 4-pin
Luminance signal: 1 Vp-p (75 ohms unbalanced)
Chrominance signal: 0.286 Vp-p (DSR-40)
0.3 Vp-p (DSR-40P)
(75 ohms unbalanced)
VIDEO: BNC type
1 Vp-p (75 ohms unbalanced)
Y: BNC type
1 Vp-p (75 ohms unbalanced)
R-Y: BNC type
0.7 Vp-p (75 ohms unbalanced)
(DSR-40: 75%, color bar/DSR-40P: 100%, color bar)
B-Y: BNC type
0.7 Vp-p (75 ohms unbalanced)
(DSR-40: 75%, color bar/DSR-40P: 100% color bar)
AUDIO CH1/3: XLR 3-pin, male, +4 dBu, 600 ohms loading, balanced.
AUDIO CH2/4: XLR 3-pin, male, +4 dBu, 600 ohms loading, balanced.

REF.VIDEO INPUT
BNC type
1 Vp-p (75 ohms unbalanced)

3-2. POWER SUPPLY SYSTEM ADJUSTMENT

1. Power Supply Voltage Check, Power Block (U-2 Board)

Mode	Playback
Measuring Instrument	Digital voltmeter
UNSW6V Check	
Measuring Point	pin ① of CN11
Specified Value	6.0 ± 0.5 Vdc
UNSW3.1V Check	
Measuring Point	pin ② of CN11
Specified Value	3.1 ± 0.2 Vdc
VIDEO5V, AUDIO5V Check	
Measuring Point	pin ③, ⑦ of CN11
Specified Value	5.0 ± 0.12 Vdc
SW3.1V Check	
Measuring Point	pin ④ of CN11
Specified Value	3.1 ± 0.1 Vdc
VIDEO–5V, AUDIO–5V Check	
Measuring Point	pin ⑥, ⑨ of CN11
Specified Value	–5.0 ± 0.12 Vdc
SW5V Check	
Measuring Point	pin ③ of CN10
Specified Value	5.0 ± 0.12 Vdc
DRUM6V Check	
Measuring Point	pin ④ of CN10
Specified Value	6.0 ± 0.5 Vdc
MOTOR14V Check	
Measuring Point	pin ⑥ of CN10
Specified Value	14.0 ± 2 Vdc

2. Video/Audio Block Power Supply Voltage Check, Power Block (U-2 Board)

Mode	Playback
Measuring Instrument	Digital voltmeter
UNSW6V Check	
Measuring Point	pin ②, ③ of CN12
Specified Value	6.0 ± 0.5 Vdc
UNSW3.1V Check	
Measuring Point	pin ④ of CN12
Specified Value	3.1 ± 0.2 Vdc
UNSW–9V Check	
Measuring Point	pin ⑦ of CN12
Specified Value	–9 ± 0.5 Vdc
UNSW14V Check	
Measuring Point	pin ⑧ of CN12
Specified Value	14 ± 2.0 Vdc
SW12V Check	
Measuring Point	pin ⑨ of CN12
Specified Value	12.0 ± 1 Vdc
SW12V Check	
Measuring Point	pin ⑪ of CN12
Specified Value	–12.0 ± 1Vdc

3-3. SYSTEM CONTROL SYSTEM ADJUSTMENT

1. Initializing the C, D, E Page Data

Note 1: If "Initializing the C, D, E Page Data" is performed, all data of the C page, D page and E page will be initialized.

Note 2: If the C, D, E page data has been initialized, "Modification of C, D, E page Data" and all adjustments need to be performed again.

Mode	E-E
Signal	Arbitrary
Adjustment Page	C
Adjustment Address	00 to 6F
Adjustment Page	D
Adjustment Address	00 to 4F
Adjustment Page	E
Adjustment Address	00 to 3B

2. Input of C page Initial Data

Input method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 4, address: 02, set data: 01, and press the PAUSE button of the adjusting remote commander.
3) Select page: 4, address: 02, and confirm that the data change in the order of "01" → "03" → "05" → "00".
4) Modify the C page data. (Refer to C page address)

3. Input of D page Initial Data

Input method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 2, address: 00, set data: 2D, and press the PAUSE button of the adjusting remote commander.
3) Select page: 2, address: 01, set data: 2D, and press the PAUSE button of the adjusting remote commander.
4) Select page: 2, address: 02, and confirm that the data is "01".
5) Modify the D page data. (Refer to D page address)

4. Input of E page Initial Data

Input method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 5, address: 00, set data: 2D, and press the PAUSE button of the adjusting remote commander.
3) Select page: 5, address: 01, set data: 2D, and press the PAUSE button of the adjusting remote commander.
4) Select page: 5, address: 02, and confirm that the data is "01".
5) Modify the E page data. (Refer to E page address)

5. Modification of C, D, E, Page Data

If the C, D, E page data has been initialized, change the data of the "Fixed data-2" address shown in the following tables by manual input.

Modifying Method:

1) Before changing the data, select page: 0, address: 01, and set data: 01.
2) New data for changing are not shown in the tables because they are different in destination. When changing the data, copy the data built in the same model.

Note : If copy the data built in the different model, this set may not operate.

3) When changing the data, press the PAUSE button of the adjusting remote commander each time when setting new data to write the data in the non-volatile memory.
4) Check that the data of adjustment addresses is the initial value. If not, change the data to the initial value.
5) After completing "Modification of C, D, E Page Data", select page: 0, address: 01, and set data: 00. Also perform all adjustments.

6. Page C Address List

Note 1: Fixed data 1: Initialized data. (Refer to 2. Input of C Page Initial Data)
Fixed data 2: Modified data. (Refer to 5. Modification of C, D, E, Page Data)

Address	Initial Value	Remark
00	Fixed data-1	
01	Fixed data-2	
02 to 0C	Fixed data-1	
0D	Fixed data-2	
0E to 2F	Fixed data-1	
30 to 3B	00	Emergency Memory Address
3C, 3D	F8	PLL fo Adjustment
3E, 3F	70	Recording Current Adjustment
40, 41	C0	AEQ Adjustment
42, 43	90	
44	86	AGC Center Level Adjustment
45	Fixed data-1	
46	86	PLL Capture Range Adjustment
47	C8	CLK Delay Adjustment
48 to 4B	Fixed data-1	
4C to 4F	00	Switching Position Adjustment
50	54	Capstan FG Duty Adjustment
51	31	
52 to 59	Fixed data-1	
5A	00	AEQ Adjustment
5B to 6F	Fixed data-1	

7. Page D Address List

Note 1: Fixed data 1: Initialized data. (Refer to 3. Input of D Page Initial Data)
Fixed data 2: Modified data. (Refer to 5. Modification of C, D, E, Page Data)

Address	Initial Value	Remark
00 to 12	Fixed data-1	
13	Fixed data-2	
14	Fixed data-1	
15 to 18	Fixed data-2	
19 to 1E	Fixed data-1	
1F	Fixed data-2	
20 to 2B	Fixed data-1	
2C to 2F	Fixed data-2	
30 to 32	Fixed data-1	
33	59	IC422 27MHz XTAL fo Adjustment
34	19	Playback CR Signal Level Adjustment
35	37	Playback CB Signal Level Adjustment
36	18	Playback Y Signal Level Adjustment
37 to 40	Fixed data-1	
41 to 43	Fixed data-2	
44 to 46	Fixed data-1	
47	Fixed data-2	
48 to 4F	Fixed data-1	

8. Page E Address List

Note 1: Fixed data 1: Initialized data. (Refer to 4. Input of E Page Initial Data)
Fixed data 2: Modified data. (Refer to 5. Modification of C, D, E, Page Data)

Address	Initial Value	Remark
00 to 27	Fixed data-1	
28 to 2C	Fixed data-2	
2D	Fixed data-1	
2E	Fixed data-2	
2F to 35	Fixed data-1	
36, 37	Fixed data-2	
38	Fixed data-1	
39	Fixed data-2	
3A	Fixed data-1	
3B	Fixed data-2	
3C to 3F	Fixed data-1	
40	76	Playback Composite VIDEO Chroma Adjustment
41	Fixed data-1	
42	83	Playback Composite VIDEO Chroma Adjustment
43	Fixed data-1	
44	88	Playback Y Signal Level Adjustment
45	Fixed data-1	
46	80	Playback CB Signal Level Adjustment
47	Fixed data-1	
48	80	Playback CR Signal Level Adjustment
49 to 4D	Fixed data-1	
4E	16	EXT Subcarrier Phase Adjustment
4F to 51	Fixed data-1	
52	80	Burst Position Adjustment (Coarse)
53	0	Burst Position Adjustment (Fine)
54	45	SYNC Position Adjustment (Coarse)
55	Fixed data-1	
56	09	SYNC Position Adjustment (Fine)
57 to 5F	Fixed data-1	
60	63	Y/C Separation (Y Signal Level) Adjustment
61	69	Y/C Separation (Chroma Signal Level) Adjustment
62	16	Playback Setup Level Adjustment
63	7A	Recording Chroma Decoder HUE Adjustment
64	7E	Recording Y Signal Level Adjustment
65	7A	Recording CB Signal Level Adjustment
66	7A	Recording CR Signal Level Adjustment
67	Fixed data-1	
68	90	Recording Y/CB Delay Adjustment
69	90	Recording Y/CR Delay Adjustment
6A	Fixed data-1	
6B	5F	Playback Y/CR Delay Adjustment
6C	6B	Playback Y/CB Delay Adjustment
6D	48	Playback SYNC Level Adjustment
6E	Fixed data-1	
6F	8B	Playback Burst Level Adjustment

Address	Initial Value	Remark
70	8B	Playback Burst Level Adjustment (PAL)
71	B1	Playback Carrier Balance Adjustment
72	8A	Playback Carrier Balance Adjustment
73	60	INT Subcarrier Frequency Adjustment
74	37	Playback Composite VIDEO Chroma Adjustment
75	50	OSD1 Subcarrier Frequency Adjustment
76	50	OSD2 Subcarrier Frequency Adjustment
77	Fixed data-1	

3-4. SERVO SYSTEM ADJUSTMENTS

1. Switching Position Adjustment (CM-56 Board)

Mode	Playback
signal	SW/OL reference tape
Measurement Point	Page: 3, address: 03 on displayed data of adjusting remote commander
Measuring Instrument	Adjusting remote commander
Adjustment Page	C
Adjustment Address	4C, 4D, 4E, 4F
Specified Value	"00"

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 01, set data: 0E, and press the PAUSE button of the adjusting remote commander.
3) Select page: 3, address: 02, and confirm that the data changes from "0E" to "00".
4) Select page: 3, address: 03, and confirm that the data is "00".
5) Turn OFF the HOLD switch on he adjusting remote commander and wait for more than 2 seconds. (The adjusted data are automatically written to page: C, address: 4C to 4F)
6) Turn ON the HOLD switch on the adjusting remote commander.
7) Select page: 0, address: 01, and set data: 00.
8) Stop the tape playback.
9) Turn the POWER switch OFF.

2. Capstan FG Duty Adjustment (CM-56 Board)

Mode	Playback
signal	Arbitrary tape
Measurement Point	Page: 3, address: 03 on displayed data of adjusting remote commander
Measuring Instrument	Adjusting remote commander
Adjustment Page	C
Adjustment Address	50, 51
Specified Value	"00"

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 01, set data: 15, and press the PAUSE button of the adjusting remote commander.
3) Select page: 3, address: 02, and confirm that the data changes from "15" to "00".
4) Select page: 3, address: 03, and confirm that the data is the following value
   When "00": Normal
   When "01": Faulty
   Perform the following adjustment only when "00" is displayed.
5) Select page: 3, address: 04 and 05, read the data, and take the values as D_{04} and D_{05} respectively.
   (The data on page: 3, address: 05 must be 2F to 3F)
6) Select page: C, address: 50, set data: D_{04}, and press the PAUSE button of the adjusting remote commander.
7) Select page: C, address: 51, set data: D_{05}, and press the PAUSE button of the adjusting remote commander.
8) Select page: 3, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
9) Select page: 0, address: 01, and set data: 00.
10) Stop the tape playback.
11) Turn the POWER switch OFF.

3-5. VIDEO SYSTEM ADJUSTMENTS

3-5-1. RP-228 Board Adjustments

1. Recording Current Adjustment (RP-228 Board)

Mode	E-E
Measurement Point	ODDch adjustment CH1: Pin ⑥ of CN771 (CL812) CH2: Pin ⑤ of CN771 (CL813) EVENch adjustment CH1: Pin ② of CN771 (CL816) CH1: Pin ③ of CN771 (CL815)
Measuring Instrument	Oscilloscope ADD mode CH2 INV mode
Adjustment Page	C
Adjustment Address	3E, 3F
Specified Value	A = 4.1 ± 0.1 Vp-p

Connection: Disconnect CN771 and connect as follows.

1) ODDch adjustment: Connect a 180 Ω resistor between Pin ⑥ of CN771 (CL812) and Pin ⑤ of CN771 (CL813).
2) EVENch adjustment: Connect a 180 Ω resistor between Pin ② of CN771 (CL816) and Pin ③ of CN771 (CL815).
   180 Ω resistor (Parts code: 1-249-408-11)

Adjusting method:

1) Equalize the vertical range of CH1 and CH2 of the oscilloscope.
2) Set the oscilloscope to the ADD mode, and set CH2 to the INV mode.
3) Select page: 0, address: 01, and set data: 01.
4) Select page: 3, address: 01, set data: 0C, and press the PAUSE button of the adjusting remote commander.
5) Select page: 3, address: 34, and set data: 01.
6) Select page: C, address: 3F (ODDch adjustment) or 3E (EVENch adjustment), change the data, and adjust the signal voltage (A) to the specified value, press the PAUSE button on the adjustment remote commander.
7) Select page: 3, address: 34, and set data: 04.
8) Select page: 3, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
9) Select page: 0, address: 01, and set data: 00.

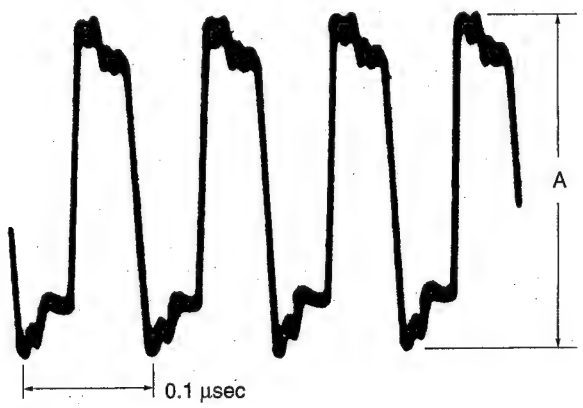


Fig. 5-3-5.

2. PLL fo Adjustment (RP-228 Board)

Mode	E-E
Measurement Point Measuring Instrument	Displayed data of page: 3, address: 04
Adjustment Page	C
Adjustment Address	3D, 3C
Specified Value	Displayed data is "FD" to "FF", "00" to "03" ("FF", "00" are center values)

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 01, set data: 05, and press the PAUSE button of the adjusting remote commander.
3) Select page: 3, address: 36, and set data: 40.
4) Select page: 3, address: 04, and check that the average value D_{04} of the displayed data is "FD" to "FF" or "00" to "03". If outside this range, select page: C, address: 3C, change the data, and check again.
   [If D_{04} is "80" to "FC"]
   Select page: C, address: 3C, and decrease the data. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander)
   [If D_{04} is "04" to "7F"]
   Select page: C, address: 3C, and increase the data. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander)
5) Select page: 3, address: 36, and set data: 05.
6) Select page: 3, address: 04, and check that the average value D_{04} of displayed data is "FD" to "FF" or "00" to "03". If outside this range, select page: C, address: 3D, change the data, and check again.
   [If D_{04} is "80" to "FC"]
   Select page: C, address: 3D, and decrease the data. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander)
   [If D_{04} is "04" to "7F"]
   Select page: C, address: 3D, and increase the data. (As the data is to be rewritten, press the PAUSE button of the adjusting remote commander)
7) Select page: 3, address: 01, set data: 00, and press the PAUSE button of the adjusting remote commander.
8) Select page: 3, address: 36, and set data: 02.

3. CLK DELAY Adjustment (RP-228 Board)

Mode	Recording/playback
Signal	Color bar
Measurement Point	CH1: Pin ⑱ of CN775 (C1ERP) CH2: Pin ⑥ of CN775 (JSWP)
Measuring Instrument	Oscilloscope Trigger source: CH2
Adjustment Page	C
Adjustment Address	47

Adjusting method:

1) Record color bar signal for two minutes on any tape.
2) Select page: 0, address: 01, and set data: 01.
3) Write the following data in page: C, address: 40 to 43, 47, 4B, 5A.
   (To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)
   Page: C, address: 40, data: C0
   Page: C, address: 41, data: C0
   Page: C, address: 42, data: 90
   Page: C, address: 43, data: 90
   Page: C, address: 47, data: C8
   Page: C, address: 4B, data: 80
   Page: C, address: 5A, data: 00
4) Playback the part recorded with the color bar.
5) Select page: C, address: 47, increase the data, and read the data D_1 when the CH1 pulse is set to the whole audio and video areas.
6) Select page: C, address: 47, decrease the data, and read the data D_2 when the CH1 pulse is set to the whole audio and video areas.
7) Obtain the average value of D_1 and D_2, and take it as D_3.
8) Select page: C, address: 47, set data: D_3, and press the PAUSE button of the adjusting remote commander.
9) Select page: C, address: 4B, set data: 0E, and press the PAUSE button of the adjusting remote commander.
10) Select page: C, address: 5A, set data: 8C, and press the PAUSE button of the adjusting remote commander.
11) Select page: 0, address: 01, and set data: 00.
12) After completing the adjusting, perform "5. AEQ Adjustment".

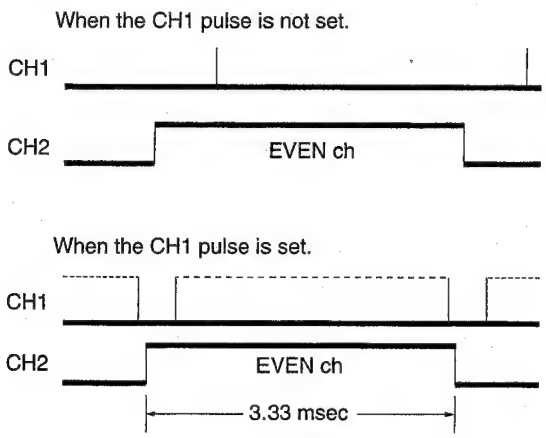


Fig. 5-3-6.

4. AGC Center Level Adjustment (RP-228 Board)

Mode	Recording/playback
Signal	Color bar
Measurement Point	CH1: Pin ⑱ of CN775 (C1ERP) CH2: Pin ⑥ of CN775 (JSWP)
Measuring Instrument	Oscilloscope Trigger source: CH2
Adjustment Page	C
Adjustment Address	44

Adjusting method:

1) Record color bar signal for two minutes on any tape.
2) Select page: 0, address: 01, and set data: 01.
3) Write the following data in page: C, addresses: 40 to 44, 4B, 5A.
   (To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)
   Page: C, address: 40, data: C0
   Page: C, address: 41, data: C0
   Page: C, address: 42, data: 90
   Page: C, address: 43, data: 90
   Page: C, address: 44, data: 90
   Page: C, address: 4B, data: 80
   Page: C, address: 5A, data: 00
4) Playback the part recorded with the color bar signal.
5) Select page: C, address: 44, increase the data, and read the data D_1 when the CH1 pulse is set to the whole audio and video areas.
6) Select page: C, address: 44, decrease data, and read the data D_2 when the CH1 pulse is set to the whole audio and video areas.
7) Obtain the average value of D_1 and D_2, and take it as D_3.
8) Select page: C, address: 44, set data: D_3, and press the PAUSE button of the adjusting remote commander.
9) Select page: C, address: 4B, set data: 00, and press the PAUSE button of the adjusting remote commander.
10) Select page: C, address: 5A, set data: 8C, and press the PAUSE button of the adjusting remote commander.
11) Select page: 0, address: 01, and set data: 00.
12) After completing the adjusting, perform "5. AEQ Adjustment".

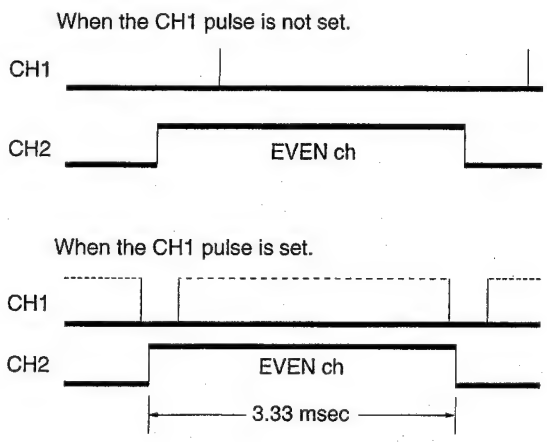


Fig. 5-3-7.

5. AEQ Adjustment (RP-228 Board)

Mode	Recording/playback
Signal	Arbitrary
Measurement Point	Pin ⑧ of CN775 (RF MONITOR) (Note 1)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	40, 41, 42, 43, 5A

Note 1: Connect a 75 Ω resistor between Pin ⑧ and ⑦ (GND) of CN 775.
75 Ω resistor (Parts code: 1-247-804-11)

Note 2: Use the DVM60ME tape or equivalents.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: C, address: 4B, set data: 80, and press the PAUSE button of the adjusting remote commander.
3) Write data in page: C, addresses: 40 to 43, and 5A as shown in the following table.
   (To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)

Address	Data
40	C0
41	C0
42	90
43	90
5A	00

4) Record color bar signal for one minute from the tape top.
5) Rewind the tape, and play back the part recorded.
6) When the RF output stabilizes, select page: 3, address: 01, and set data: 07, and press the PAUSE button of the adjusting remote commander.
7) About 20 to 30 seconds after pressing the PAUSE button, select page: 3, address: 02, and check that the data changes from "07" to "00".
8) Select page: 3, address: 03, and check that the data is the following value.
   When "00" : Normal
   When "01" : EVENch is faulty
   When "02" : ODDch is faulty
   When "03" : EVENch and ODDch are faulty
   Perform the following procedure only when "00" is displayed.
9) Select page: 3, address: 04 to 07, read the data, and take the values as D_{04}, D_{05}, D_{06}, and D_{07}.
10) Select page: C, address: 40, set data: D_{04}, and press the PAUSE button of the adjusting remote commander.
11) Select page: C, address: 42, set data: D_{05}, and press the PAUSE button of the adjusting remote commander.
12) Select page: C, address: 41, set data: D_{06}, and press the PAUSE button of the adjusting remote commander.
13) Select page: C, address: 40, set data: D_{07}, and press the PAUSE button of the adjusting remote commander.
14) Select page: C, address: 5A, set data: 8C, and press the PAUSE button of the adjusting remote commander.
15) Select page: C, address: 4B, set data: 00, and press the PAUSE button of the adjusting remote commander.
16) Select page: C, address: 01, and set data: 00.

6. PLL Capture Range Adjustment (RP-228 Board)

Mode	Recording/Playback
Signal	Color bar
Measurement Point	CH1: Pin ⑱ of CN775 (C1ERP) CH2: Pin ⑥ of CN775 (JSWP)
Measuring Instrument	Oscilloscope Trigger source: CH2
Adjustment Page	C
Adjustment Address	46

Adjusting method:

1) Record color bar signal for two minutes on any tape.
2) Select page: 0, address: 01, and set data: 01.
3) Write the following data in page: C, addresses: 4B and 5A.
   (To write the data, press the PAUSE button of the adjusting remote commander each time data is set.)
   Page: C, address: 4B, data: 80
   Page: C, address: 5A, data: 00
4) Playback the part recorded with the color bar signal.
5) Select page: C, address: 46, set data: 80, and press the PAUSE button of the adjusting remote commander.
6) Select page: C, address: 46, set the data to "60", and check that the pulse is not set at the audio area head of the ERRP waveform's ODDch of the oscilloscope (CH1).
7) Select page: C, address: 46, set the data to "A0", and check that the pulse is not set at the audio area head of the C1ERP waveform's ODDch of the oscilloscope (CH1).
   After confirming steps 6) and 7), select page: C, address: 46, set data: 80 again and proceed to step 12).
8) If the pulse is set in steps 6) and 7), select page: C, address: 46, increase the data from "80", and read the data D_1 when the pulse is set at the audio area head of CH1.
9) Select page: C, address: 46, decrease the data from "80", and read the data D_2 when the pulse is set at the audio area head of CH1.
10) Obtain the average value of D_1 and D_2, and take it as D_3.
11) Select page: C, address: 46, set data: D_3, and press the PAUSE button of the adjusting remote commander.
12) Select page: C, address: 4B, set data: 00, and press the PAUSE button of the adjusting remote commander.
13) Select page: C, address: 5A, set data: 8C, and press the PAUSE button of the adjusting remote commander.
14) Select page: 0, address: 01, and set data: 00.

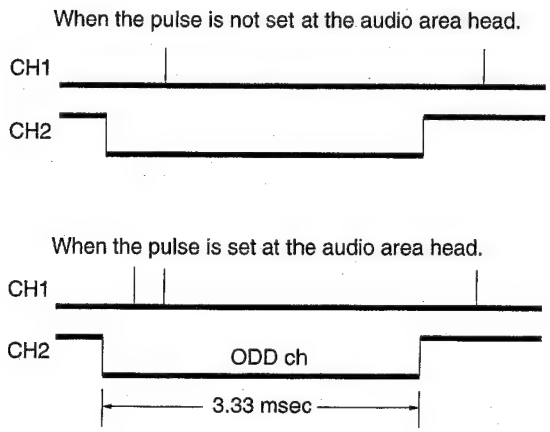


Fig. 5-3-8.

7. IC774 41.85 MHzVCO Check (RP-228 Board)

Mode	E-E
Signal	Arbitrary
Measurement Point	Page: 3, address: 39 on displayed data of
Measuring Instrument	adjustment remote commander
Adjustment Value	"37" to "C9" (0.6 to 2.2 Vdc)

Check method:

1) Select page: 3, address: 39, and check that the displayed data is "37" to "C9".

3-5-2. JC-19 Board Adjustments

1. A/D Converter Reference Voltage Adjustment 1 (JC-19 Board)

Mode	E-E
Signal	Arbitrary
Measurement Point	Pin ⑤ of IC013 (CL061)
Measuring Instrument	Digital voltmeter
Adjusting Element	RV001
Specified Value	A = 2.83 ± 0.01 Vdc

Adjusting method:

1) Set the VRT voltage (A) to the specified value using RV001.

2. A/D Converter Reference Voltage Adjustment 2 (JC-19 Board)

Mode	E-E
Signal	Arbitrary
Measurement Point	Pin ③ of IC013 (CL062)
Measuring Instrument	Digital voltmeter
Adjusting Element	RV002
Specified Value	A = 0.96 ± 0.01 Vdc

Adjusting method:

1) Set the VBT voltage (A) to the specified value using RV002.

3. Y Signal Clamp Reference Voltage Adjustment (JC-19 Board)

Mode	E-E
Signal	Color bar
Measurement Point	Pin ⑧ of IC011 (CL054)
Measuring Instrument	Digital voltmeter
Adjusting Element	RV011
Specified Value	A = 1.150 ± 0.005 Vdc

Connection: Connect a jumper wire between Pin ⑥ of IC018 (CL150) and GND.

Adjusting method:

1) Set the Y signal clamp reference voltage (A) to the specified value using RV011.

4. CR Signal Clamp Reference Voltage Adjustment (JC-19 Board)

Mode	E-E
Signal	Color bar
Measurement Point	Pin ⑧ of IC010 (CL052)
Measuring Instrument	Digital voltmeter
Adjusting Element	RV010
Specified Value	A = 1.900 ± 0.005 Vdc

Connection: Connect a jumper wire between Pin ⑥ of IC018 (CL150) and GND.

Adjusting method:

1) Set the CR signal clamp reference voltage (A) to the specified value using RV010.

5. CB Signal Clamp Reference Voltage Adjustment (JC-19 Board)

Mode	E-E
Signal	Color bar
Measurement Point	Pin ⑧ of IC009 (CL053)
Measuring Instrument	Digital voltmeter
Adjusting Element	RV012
Specified Value	A = 1.900 ± 0.005 Vdc

Connection: Connect a jumper wire between Pin ⑥ of IC018 (CL150) and GND.

Adjusting method:

1) Set the CB signal clamp reference voltage (A) to the specified value using RV012.

6. Playback Y Signal Level Adjustment (JC-19 Board)

Mode	Recording
Signal	DV input (Note 1)
Measurement Point	Pin ⑧ of CN104 or pin ㉓ of CN102 on VA-106 board
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	36
Specified Value	A = 0.43 ± 0.04 V (NTSC) A = 0.41 ± 0.04 V (PAL)

Note 1: Generate color bar signal with NTSC: DCR-VX1000/ PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 36, change data, and adjust the Y signal level (A) to the specified value.
3) Select page: 0, address: 01, and set data: 00.

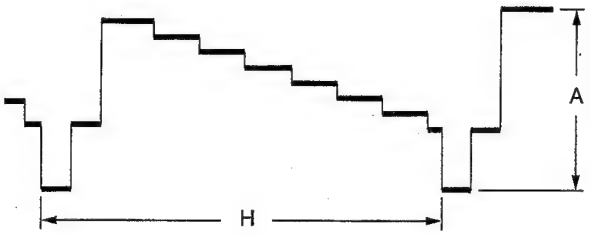


Fig. 5-3-9.

7. Playback CR Signal Level Adjustment (JC-19 Board)

Mode	Recording
Signal	DV input (Note 1)
Measurement Point	Pin ⑩ of CN104 or pin ㉑ of CN102 on VA-106 board
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	34
Specified Value	A = 540 ± 10 mV

Note 1: Generate color bar signal with NTSC: DCR-VX1000/ PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 34, change data, and adjust the CR signal level (A) to the specified value.
3) Select page: 0, address: 01, and set data: 00.

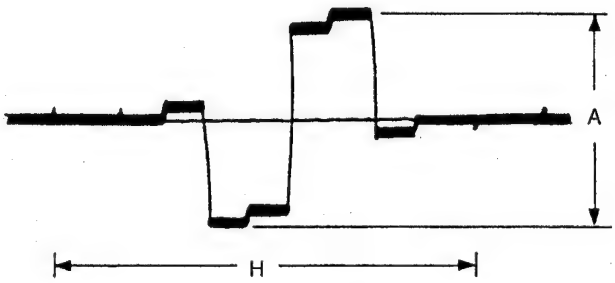


Fig. 5-3-10.

8. Playback CB Signal Level Adjustment (JC-19 Board)

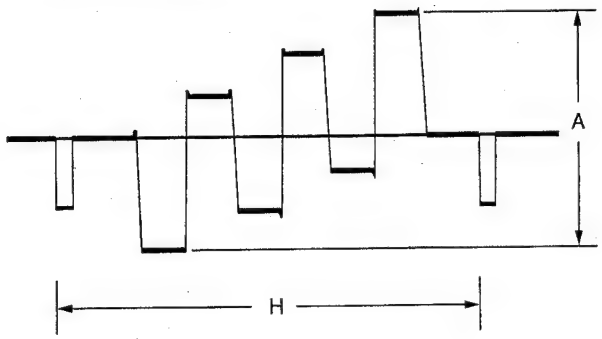
Mode	Recording
Signal	DV input (Note 1)
Measurement Point	Pin ⑫ of CN104 or pin ⑲ of CN102 on VA-106 board
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	35
Specified Value	A = 390 ± 10 mV

Note 1: Generate color bar signal with NTSC: DCR-VX1000/ PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Adjusting method:

1) Select page: 0, address: 01, and set data: 00.
2) Select page: D, address: 35, change data, and adjust the CB signal level (A) to the specified value.
3) Select page: 0, address: 01, and set data: 00.

For NTSC model



For PAL model

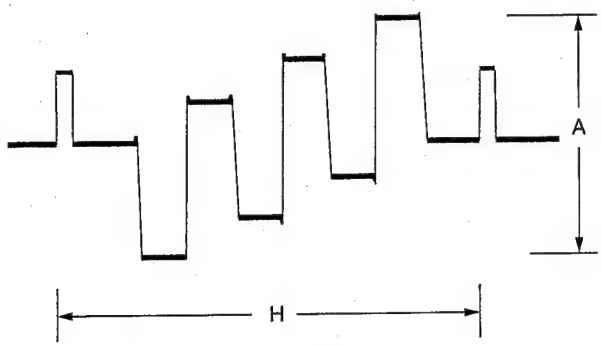


Fig. 5-3-11.

9. IC422 27MHz XTAL fo Adjustment (JC-19 Board)

Mode	Playback
Signal	Arbitrary tape
Measurement Point	Pin ㉘ of IC442 (CL479)
Measuring Instrument	Frequency counter
Adjustment Page	D
Adjustment Address	33
Specified Value	f = 13500000 ± 100 Hz

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 33, change data, and adjust the clock frequency (f) to the specified value.
3) Press the PAUSE button on the adjusting remote commander.
4) Select page: 0, address: 01, and set data: 00.

10. AFC Preliminary Adjustment (JC-19 Board)

Mode	Recording
Signal	Color bar
Measurement Point	Pin ⑨ of IC205 (CL214)
Measuring Instrument	Digital voltmeter
Adjusting Element	CT201
Specified Value	A = 1.9 ± 0.5 Vdc

Adjusting method:

1) Set the DC voltage (A) to the specified value using CT201.

11. AFC Picture Frame Adjustment (JC-19 Board)

Mode	Recording
Signal	Color bar (Video input) (Note 1)
Measurement Point	CH1: Pin ㉑ of IC017 (CL051) CH2: Pin ㉘ of IC205 (CL222)
Measuring Instrument	Oscilloscope
Adjusting Element	RV201
Specified Value	T = 110 ± 10 nsec

Note 1: Set "VIDEO" mode with the INPUT SELECT button on the front panel.

Adjusting method:

1) Set the time difference (T) between the H SYNC falling and AFH rising to the specified value using RV201.

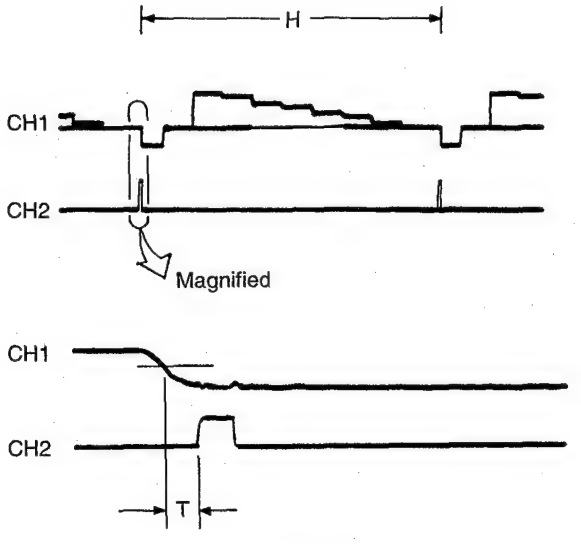


Fig. 5-3-12.

12. AFC Adjustment (JC-19 Board)

Mode	Recording
Signal	Color bar
Measurement Point	Pin ⑨ of IC205 (CL214)
Measuring Instrument	Digital voltmeter
Adjusting Element	CT201
Specified Value	A = 1.80 ± 0.05 Vdc

Adjusting method:

1) Set the DC voltage (A) to the specified value using CT201.

3-5-3. General Adjustments

1. Playback Y/CR Delay Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	CH1: Component Y output terminal CH2: Component R-Y output terminal
Measuring Instrument	Oscilloscope (Overlay displayed)
Adjustment Page	E
Adjustment Address	6B
Specified Value	A = B (±20 nsec or less)

Note 1: Set "DV" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 6B, and change data to adjust so that the Y signal and R-Y signal cross at the boundary of green and magenta with A-B. Then, press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

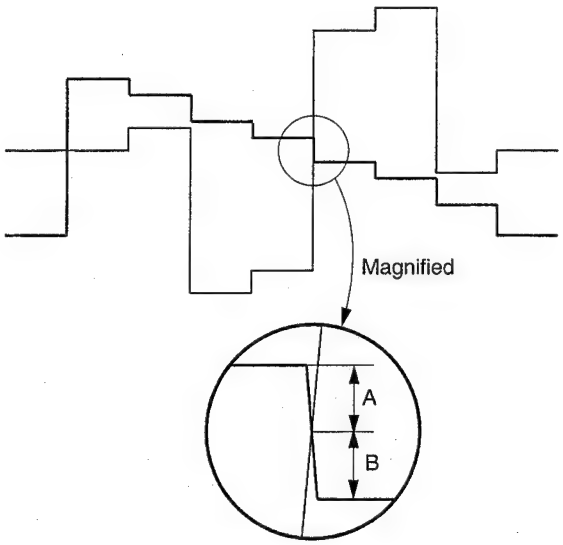


Fig. 5-3-13.

2. Playback Y/CB Delay Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	CH1: Component Y output terminal CH2: Component B-Y output terminal
Measuring Instrument	Oscilloscope (Overlay displayed)
Adjustment Page	E
Adjustment Address	6C
Specified Value	A = B (±20 nsec or less)

Note 1: Set "DV" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 6C, and change data to adjust so that the Y signal and B-Y signal cross at the boundary of green and magenta with A-B. Then, press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

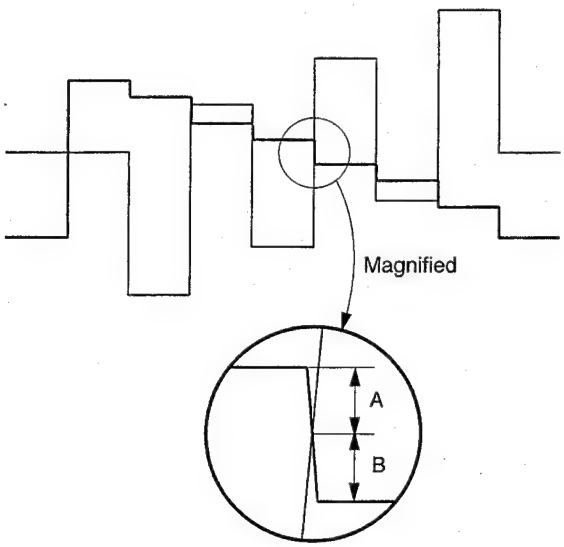


Fig. 5-3-14.

3. Playback Y Signal Level Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	Componet Y output terminal
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	44
Specified Value	A = 714 ± 7 mV (NTSC) A = 700 ± 7 mV (PAL)

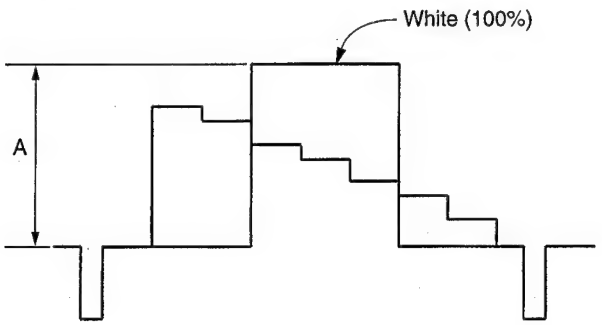
Note 1: Set "DV" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Note 2: Perform this adjustment after confirming that the specified value in the following adjustment of the JC-19 board has been satisfied.
1.Playback CR Signal Level Adjustment.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 44, change the data, adjust the white (100%) signal level (A) to the specified value, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

For NTSC model



For PAL model

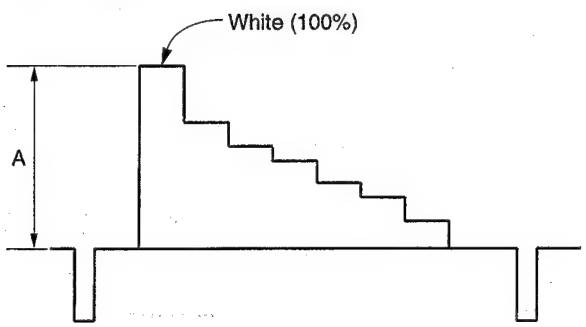


Fig. 5-3-15.

4. Playback Setup Level Adjustment (VA-106 Board)

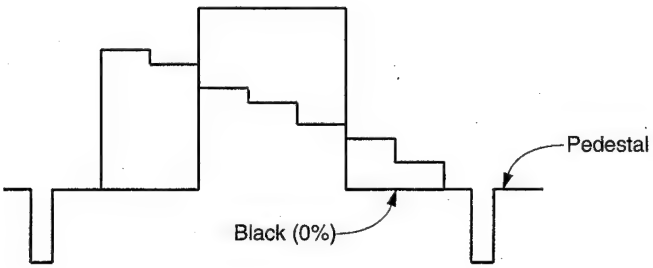
Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	Componet Y output terminal
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	62
Specified Value	Black level = Pedestal level

Note 1: Set "DV" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 62, and change data to adjust so that the black (0%) signal level becomes same as pedestal. Then, press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00

For NTSC model



For PAL model

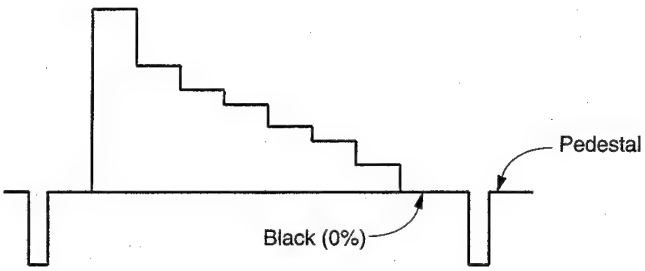


Fig. 5-3-16.

5. Playback CR Signal Level Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	Componet R-Y output terminal
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	48
Specified Value	A = 756.8 ± 7 mVp-p (NTSC) A = 525 ± 7 mVp-p (PAL)

Note 1: Set "DV" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/ PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Note 2: Perform this adjustment after confirming that the specified value in the following adjustment of the JC-19 board has been satisfied.
1.Playback CR Signal Level Adjustment.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 48, change the data, adjust the R-Y signal level (A) to the specified value, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

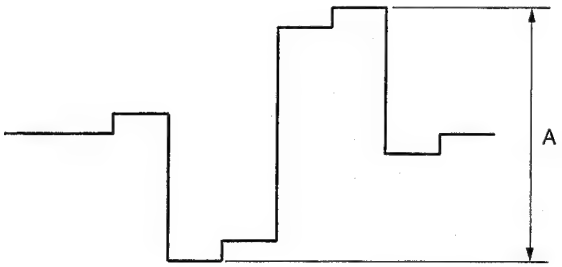


Fig. 5-3-17.

6. Playback CB Signal Level Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	Componet B-Y output terminal
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	46
Specified Value	A = 756.8 ± 7 mVp-p (NTSC) A = 525 ± 7 mVp-p (PAL)

Note 1: Set "DV" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/ PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Note 2: Perform this adjustment after confirming that the specified value in the following adjustment of the JC-19 board has been satisfied.
1.Playback CB Signal Level Adjustment.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 46, change the data, adjust the B-Y signal level (A) to the specified value, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

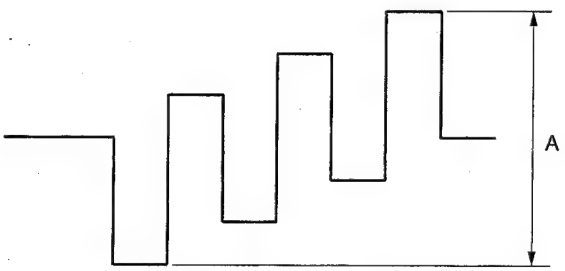


Fig. 5-3-18.

7. Playback Sync Level Adjustment (VA-106 Board)

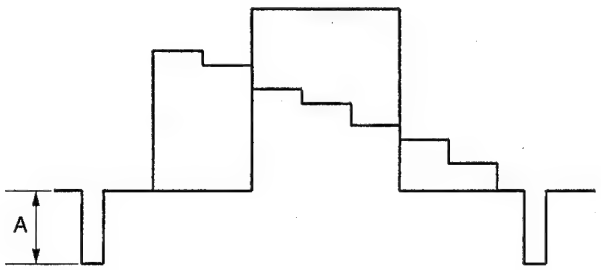
Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	Componet Y output terminal
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	6D
Specified Value	A = 286 ± 3 mV (NTSC) A = 300 ± 3 mV (PAL)

Note 1: Set "DV" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/ PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 6D, change the data, adjust the Y signal SYNC level (A) to the specified value, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

For NTSC model



For PAL model

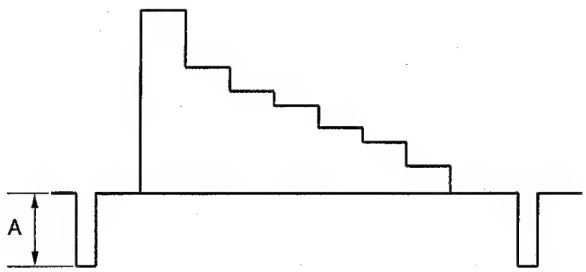


Fig. 5-3-19.

8. Playback Carrier Balance Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	Composite VIDEO output terminal
Measuring Instrument	Vectorscope, Oscilloscope
Adjustment Page	E
Adjustment Address	71, 72
Specified Value	A = 15 mVp-p or less

Note 1: Set "DV" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/ PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

For NTSC model

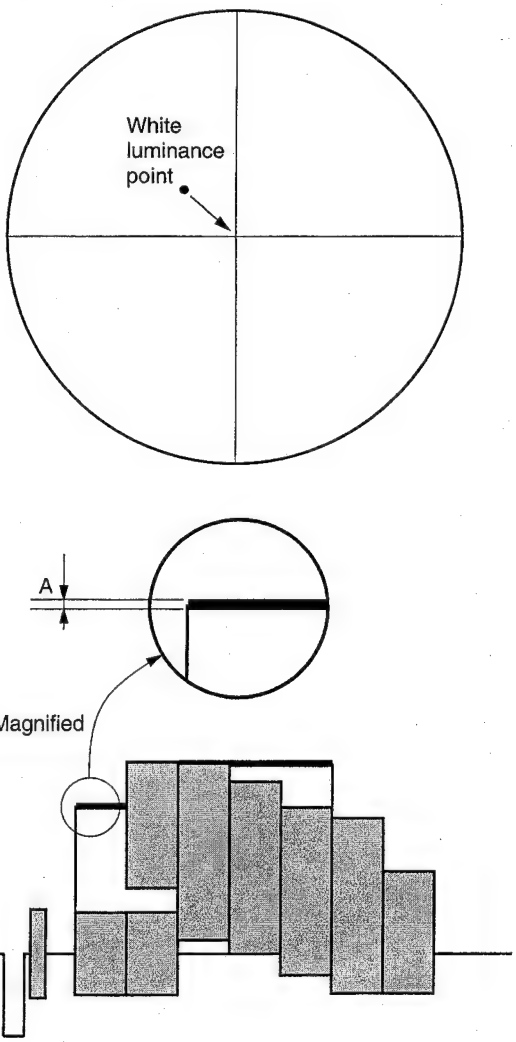


Fig. 5-3-20.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 71, 72 and change data to adjust with the vectorscope (use with large gain in UNCAL mode) so that a white luminance point of video signal coincides with the center. Then, press the PAUSE button of the adjusting remote commander.
3) Confirm with the oscilloscope that the carrier (A) of white part of color bars satisfies the specified value.
4) Select page: 0, address: 01, and set data: 00.

For PAL model

PAL model is two white luminance points.

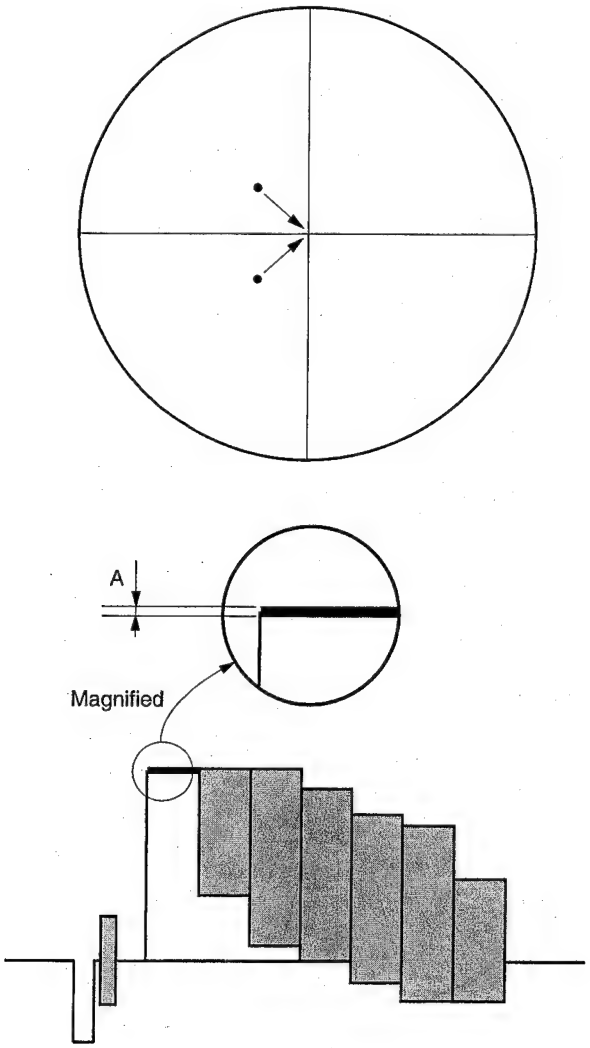


Fig. 5-3-21.

9. Playback Burst Level Adjustment (VA-106 Board)

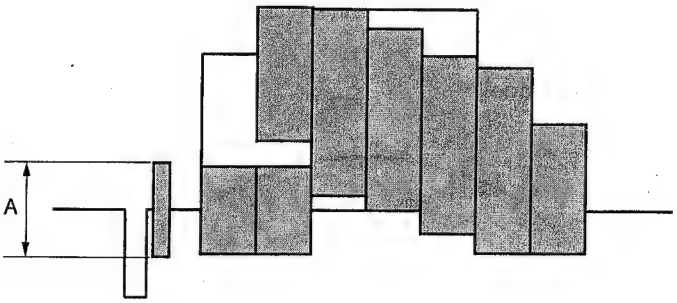
Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	Composite VIDEO output terminal
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	6F (NTSC) 6F, 70 (PAL)
Specified Value	A = 286 ± 2 mV (NTSC) A = 300 ± 2 mV (PAL)

Note 1: Set "DV" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: (6F: NTSC, 6F and 70: PAL), change the data, adjust the VIDEO signal burst level (A) to the specified value, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00

For NTSC model



For PAL model

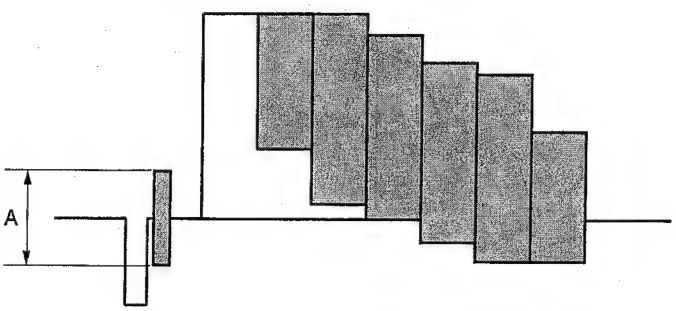


Fig. 5-3-22.

10. Playback Composite VIDEO Chroma (R-Y Signal Level) Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	Composite VIDEO output terminal
Measuring Instrument	Vectorscope
Adjustment Page	E
Adjustment Address	42
Specified Value	Phase: 102 ± 2.5° (NTSC) 102 ± 3° (PAL) Gain: 630 ± 18mV (NTSC) 630 ± 35mV (PAL)

Note 1: Set "DV" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/ PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Adjust the burst luminance point to the specified position using the PHASE and GAIN knobs of the vectorscope.
3) Select page: E, address: 42, change the data, adjust a red luminance point to the specified position (inside of thick frame), and press the PAUSE button of the adjusting remote commander.
4) select page: 0, address: 01, and set data: 00.

For NTSC model

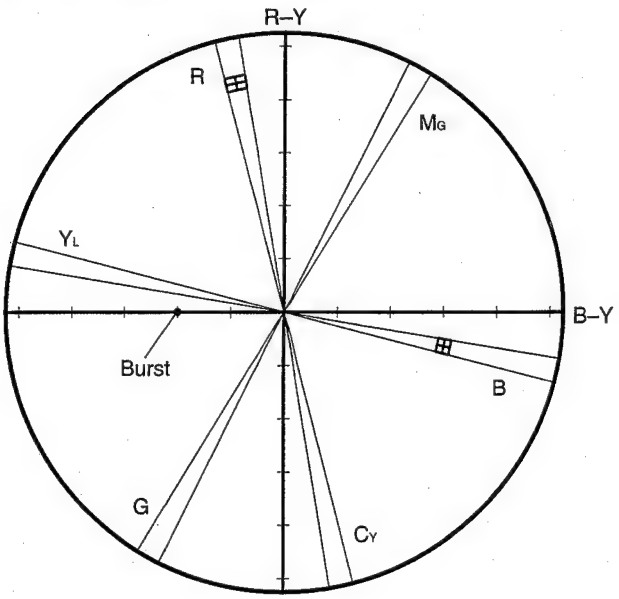


Fig. 5-3-23.

11. Playback Composite VIDEO Chroma (B-Y Signal Level) Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	CompositeVIDEO output terminal
Measuring Instrument	Vectorscope
Adjustment Page	E
Adjustment Address	40
Specified Value	Phase: 348 ± 2.5° (NTSC) 348 ± 3° (PAL) Gain: 440 ± 18mV (NTSC) 440 ± 35mV(PAL)

Note 1: Set "DV" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/ PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Adjust the burst luminance point to the specified position using the PHASE and GAIN knobs of the vectorscope.
3) Select page: E, address: 40, change the data, adjust a blue luminance point to the specified position (inside of thick frame), and press the PAUSE button of the adjusting remote commander.
4) Select page: 0, address: 01, and set data: 00.

For PAL model

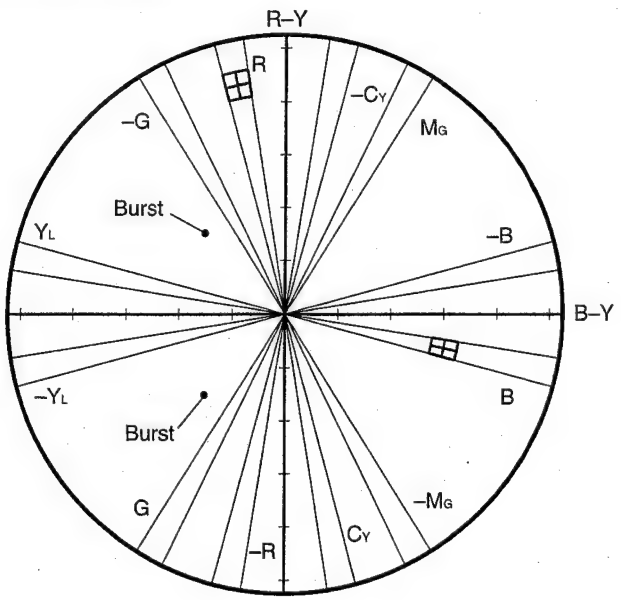


Fig. 5-3-24.

12. Playback Composite VIDEO Chroma (R-Y Phase) Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	Composite VIDEO output terminal
Measuring Instrument	Vectorscope
Adjustment Page	E
Adjustment Address	74
Specified Value	Phase: 102 ± 2.5° (NTSC) 102 ± 3° (PAL) Gain: 630 ± 18mV (NTSC) 630 ± 35mV (PAL)

Note 1: Set "DV" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/ PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Adjust the burst luminance point to the specified position using the PHASE and GAIN knobs of the vectorscope.
3) Select page: E, address: 74, change the data, adjust a red luminance point to the specified position (inside of thick frame), and press the PAUSE button of the adjusting remote commander.
4) At this time, confirm that other color luminance points are inside each phase specified frame (±2.5°: NTSC, ±3°: PAL).
5) Select page: 0, address: 01, and set data: 00.

13. INT Subcarrier Frequency Adjustment (GL-10 Board)

Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	Composite VIDEO output terminal
Measuring Instrument	Pattern generator (External synchronization mode) Frequency counter (Note 2)
Adjustment Page	E
Adjustment Address	73
Specified Value	f = 3579545 ± 5 Hz (NTSC) f = 4433619 ± 5 Hz (PAL)

Note 1: Set "DV input" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal. (How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Note 2: Connection of equipment

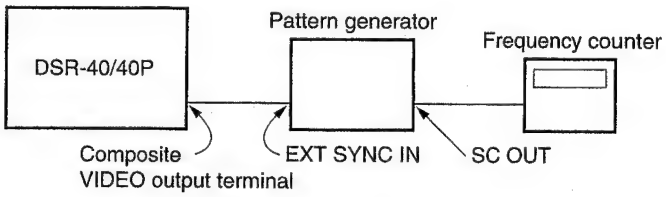


Fig. 5-3-25.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 73, change the data, adjust the INT subcarrier frequency (f) to the specified value, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00

14. Decoder Freerunning Frequency Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (Burst signal, Chroma signal OFF) (S VIDEO input) (Note 1)
Measurement point	TP201
Measuring Instrument	Frequency counter (Note 2)
Adjusting Element	CT201
Specified Value	f=3579545 ± 20 Hz (NTSC) f=4433619 ± 20 Hz (PAL)

Note 1: Set "S VIDEO" mode with the INPUT SELECT button on the front panel.

Note 2: Connect the frequency counter via high input impedance equipment such as an oscilloscope.

Adjusting method:

1) Set the Decoder freerunning frequency (f) to the specified value using CT201.

15. Recording Y/CR Delay Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (S VIDEO input) (Note 1)
Measurement point	CH1: Component Y output terminal CH2: Component R-Y output terminal
Measuring Instrument	Oscilloscope (Overlay displayed)
Adjustment Page	E
Adjustment Address	69
Specified Value	A = B (±20 nsec or less)

Note 1: Set "S VIDEO" mode with the INPUT SELECT button on the front panel.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 69, and change data to adjust so that the Y signal and R-Y signal cross at the boundary of green and magenta with A-B. Then, press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

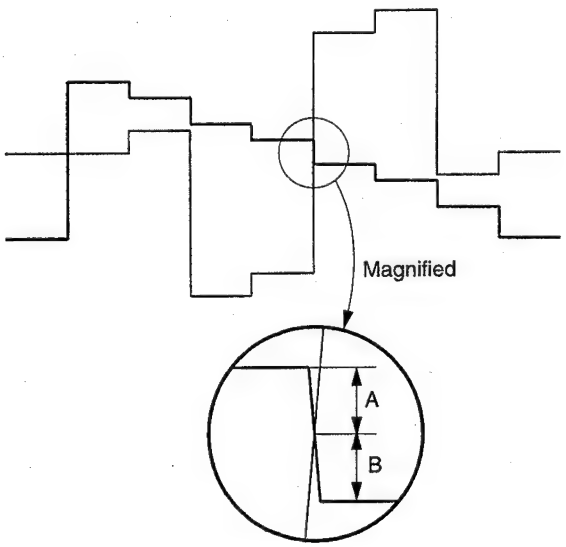


Fig. 5-3-26.

16. Recording Y/CB Delay Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (S VIDEO input) (Note 1)
Measurement point	CH1: Component Y output terminal CH2: Component B-Y output terminal
Measuring Instrument	Oscilloscope (Overlay displayed)
Adjustment Page	E
Adjustment Address	68
Specified Value	A = B (±20 nsec or less)

Note 1: Set "S VIDEO" mode with the INPUT SELECT button on the front panel.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 68, and change data to adjust so that the Y signal and B-Y signal cross at the boundary of green and magenta with A-B. Then, press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

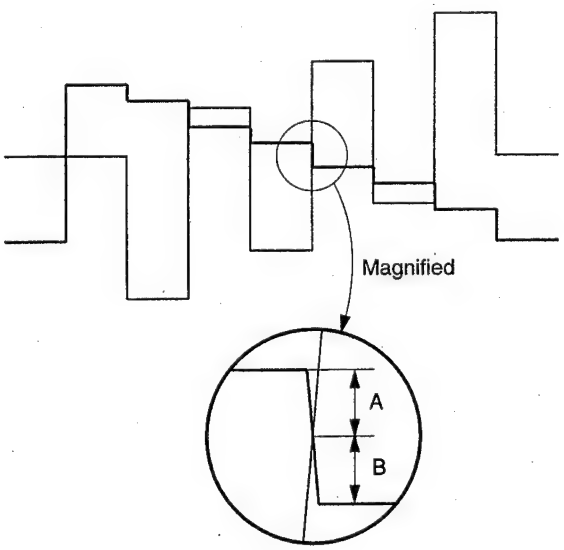


Fig. 5-3-27.

17. Recording Y Signal Level Adjustment (VA-106 Board)

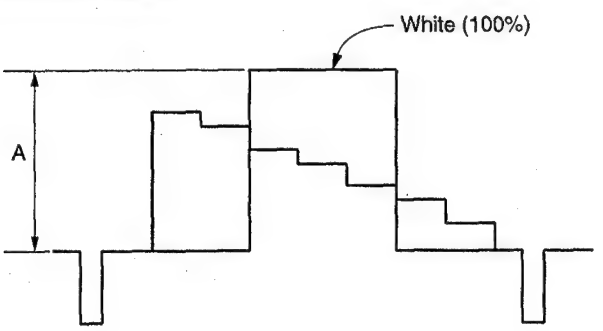
Mode	E-E
Signal	Color bar (S VIDEO input) (Note 1)
Measurement point	Componet Y output terminal
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	64
Specified Value	A = 714 ± 7 mV (NTSC) A = 700 ± 7 mV (PAL)

Note 1: Set "S VIDEO" mode with the INPUT SELECT button on the front panel.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 64, change the data, adjust the white (100%) signal level (A) to the specified value, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

For NTSC model



For PAL model

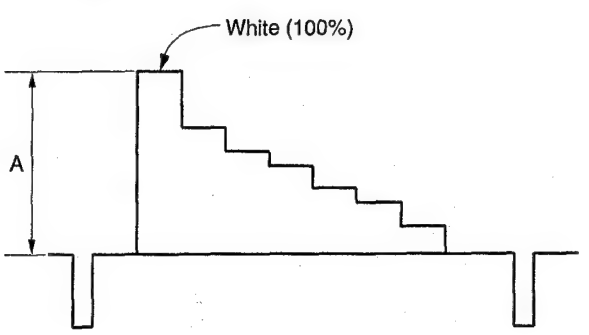


Fig. 5-3-28.

18. Recording Chroma Decoder HUE Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (S VIDEO input) (Note 1)
Measurement point	Componet B-Y output terminal
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	63
Specified Value	A = B = C

Note 1: Set "S VIDEO" mode with the INPUT SELECT button on the front panel.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 63, and change data to adjust so that A, B, and C amplitudes of B-Y signal are equal. Then, press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00

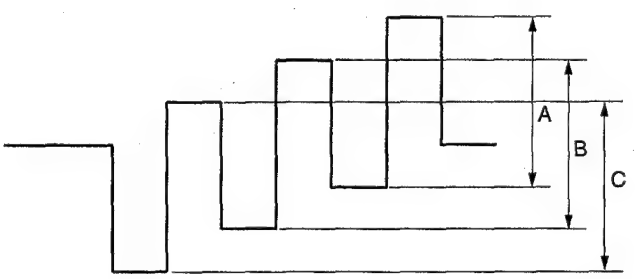


Fig. 5-3-29.

19. Recording CR Signal Level Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (S VIDEO input) (Note 1)
Measurement point	Componet R-Y output terminal
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	66
Specified Value	A = 756.8 ± 7 mVp-p (NTSC) A = 525 ± 7 mVp-p (PAL)

Note 1: Set "S VIDEO" mode with the INPUT SELECT button on the front panel.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 66, change the data, adjust the R-Y signal level (A) to the specified value, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

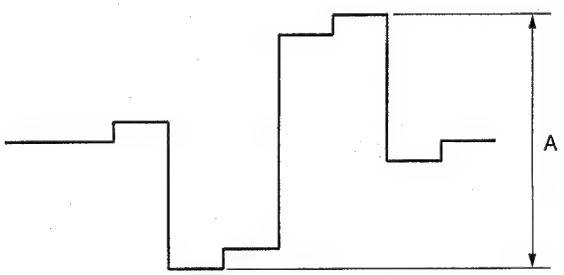


Fig. 5-3-30.

20. Recording CB Signal Level Adjustment (VA-106 Board)

Mode	E-E
Signal	Color bar (S VIDEO input) (Note 1)
Measurement point	Componet B-Y output terminal
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	65
Specified Value	A = 756.8 ± 7 mVp-p (NTSC) A = 525 ± 7 mVp-p (PAL)

Note 1: Set "S VIDEO" mode with the INPUT SELECT button on the front panel.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 65, change the data, adjust the B-Y signal level (A) to the specified value, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

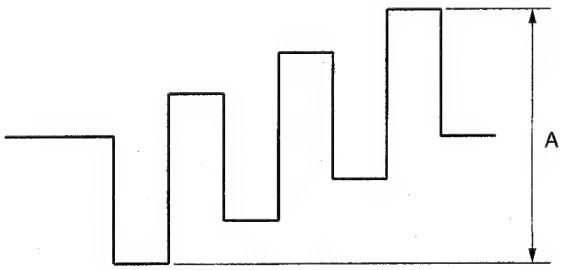


Fig. 5-3-31.

21. SYNC Position Adjustment (GL-10 Board)

Mode	Playback
Signal	Arbitrary tape Black burst (REF.VIDEO input)
Measurement point	CH1: Black burst (The same signal that REF.VIDEO input) CH2: Composite VIDEO output
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	56 (Coarse), 54 (Fine)
Specified Value	T = 0 ± 10 nsec

Note 1: Set "S VIDEO" mode with the INPUT SELECT button on the front panel.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 56, 54, and change data to adjust so that the difference in SYNC fall time (T) between CH1 and CH2 satisfies the specified value. Then, press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

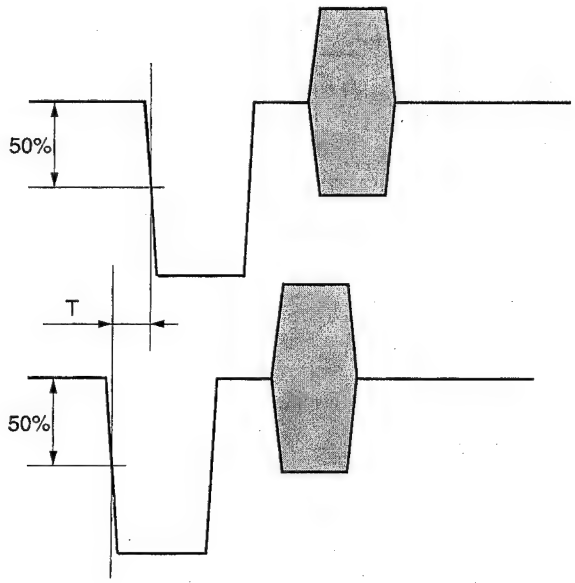


Fig. 5-3-32.

22. EXT Subcarrier Phase Adjustment (GL-10 Board)

Mode	Playback
Signal	Arbitrary tape Black burst (REF.VIDEO input)
Measurement point	CH1: Black burst (The same signal that REF.VIDEO input) CH2: Composite VIDEO output
Measuring Instrument	Vectorscope (SC PHASE displayed mode)
Adjustment Page	E
Adjustment Address	4E
Specified Value	Phase: 0 ± 0.5°

Note 1: Set "S VIDEO" mode with the INPUT SELECT button on the front panel.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Adjust the phase of black burst to horizontal axis.
3) Select page: E, address: 4E, and change data to adjust so that the phase of composite video output becomes 0 + 0.5°. Then, press the PAUSE button of the adjusting remote commander.
4) Select page: 0, address: 01, and set data: 00.

23. Burst Position Adjustment (GL-10 Board)

Mode	E-E
Signal	Color bar (DV input) (Note 1)
Measurement point	Composite VIDEO output
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	52 (Coarse), 53 (Fine)
Specified Value	T = 0.6 ± 0.1 µsec (NTSC) T = 0.9 ± 0.1 µsec (PAL)

Note 1: Set "DV input" mode with the INPUT SELECT button on the front panel. Generate color bar signal with NTSC: DCR-VX1000/PAL: DCR-VX1000E and enter it to the DV terminal.
(How to generate color bars: Connect the adjusting remote commander to the NTSC: DCR-VX1000/PAL: DCR-VX1000E, select page: 5, address: 02, and set data: 09. After adjustment, be sure to return the data to "00")

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, addresses: 52, 53, and change data to adjust so that the time (T) from 50% position of SYNC leading edge to 50% position of burst leading edge satisfies the sprcified value. Then, press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00

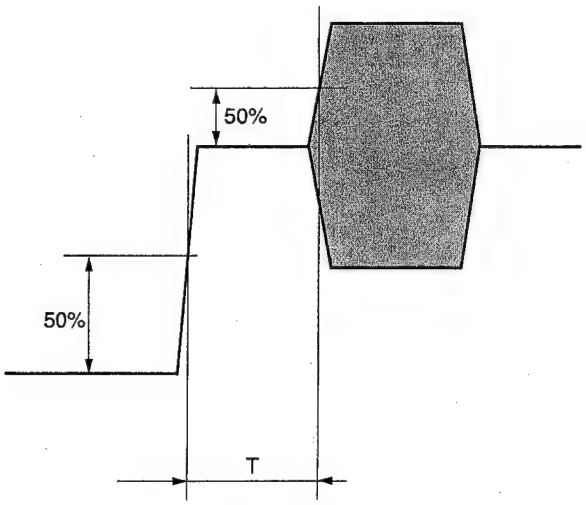


Fig. 5-3-33.

24. Y/C Separation Adjustment (VA-106 Board)

(1) Y Signal Level Adjutment

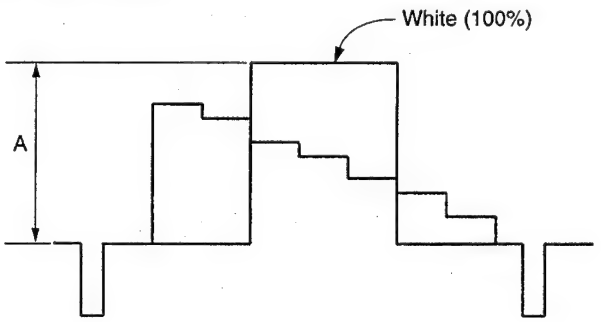
Mode	E-E
Signal	Color bar (VIDEO input) (Note 1)
Measurement point	Componet Y output terminal
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	60
Specified Value	A = 714 ± 7 mVp-p (NTSC) A = 700 ± 7 mVp-p (PAL)

Note 1: Set "VIDEO" mode with the INPUT SELECT button on the front panel.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 60, change the data, adjust the Y signal level (A) to the specified value, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

For NTSC model



For PAL model

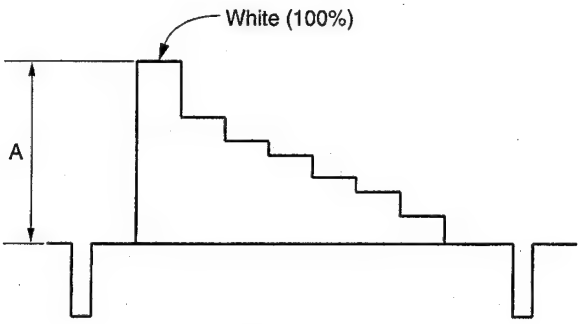


Fig. 5-3-34.

(2) Chroma Signal Level Adjutment

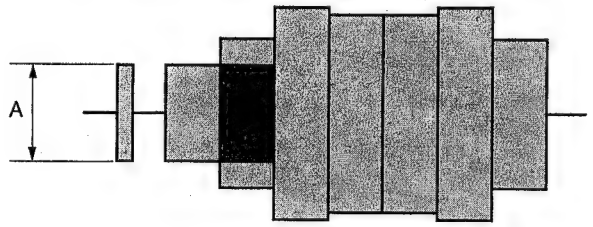
Mode	E-E
Signal	Color bar (VIDEO input) (Note 1)
Measurement point	S VIDEO output (C) terminal
Measuring Instrument	Oscilloscope
Adjustment Page	E
Adjustment Address	61
Specified Value	A = 286 ± 10 mVp-p (NTSC) A = 300 ± 10 mVp-p (PAL)

Note 1: Set "S VIDEO" mode with the INPUT SELECT button on the front panel.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 61, change the data, adjust the burst signal level (A) to the specified value, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

For NTSC model



For PAL model

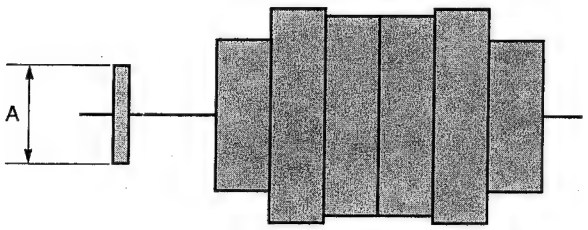


Fig. 5-3-35.

25. OSD1 Subcarrier Adjustment (VA-106 Board)

Mode	E-E
Signal	No signal (S VIDEO input) (Note 1)
Measurement point	MONITOR VIDEO output terminal
Measuring Instrument	Pattern generator (External synchronization mode) Frequency counter (Note 2)
Adjustment Page	E
Adjustment Address	75
Specified Value	f = 3579545 ± 15 Hz (NTSC) f = 4433619 ± 15 Hz (PAL)

Note 1: Set "S VIDEO" mode with the INPUT SELECT button on the front panel.

Note 2: Connection of equipment

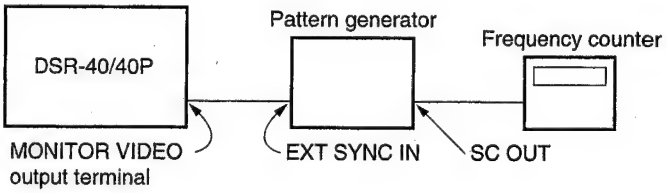


Fig. 5-3-36.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: E, address: 75, and change the data, adjust OSD1 subcarrier frequency (f) to the specified value, and press the PAUSE button of the adjusting remote commander.
3) Select page: 0, address: 01, and set data: 00.

26. OSD2 Subcarrier Adjustment (VA-106 Board)

Mode	E-E
Signal	No signal (S VIDEO input) (Note 1)
Measurement point	MONITOR VIDEO output terminal
Measuring Instrument	Pattern generator (External synchronization mode) Frequency counter (Note 2)
Adjustment Page	E
Adjustment Address	76
Specified Value	f = 3579545 ± 15 Hz (NTSC) f = 4433619 ± 15 Hz (PAL)

Note 1: Set "S VIDEO" mode with the INPUT SELECT button on the front panel.

Note 2: Connection is refer to "Fig. 5-3-36".

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Open the SEARCH screen using the MENU button on the front panel.
3) Select page: E, address: 76, change the data, adjust OSD2 subcarrier frequency (f) to the specified value, and press the PAUSE button of the adjusting remote commander.
4) Select page: 0, address: 01, and set data: 00.

3-5-4. BIST Check

1. Playback System Check (JC-19, RP-228 Boards)

1) Connect the adjusting remote commander to the LANC terminal, and turn the HOLD switch ON.
2) Playback the BIST check tape.

IC411(D1) Playback System Check

3) Select page: 4, address: 11, set data: 04, and press the PAUSE button.
4) Select page: 4, address: 11, set data: 00, and press the PAUSE button.
5) Select page: 4, address: 13, set data: 03, and press the PAUSE button.
   (Data automatically returns to "00")
6) If IC411 (D1) → IC401 (U1) playback system is normal, the following data are displayed on page: 4, addresses: 14, 15.

Page	Address	Data
4	15	E5
4	14	11

7) If IC411(D1) → IC701 (IND1) playback system is normal, the following data are displayed on page: 4, addresses: 16, 17.

Page	Address	Data
4	17	C0 or BA
4	16	6E or 04

8) If IC411(D1) → IC805 (A1) playback system is normal, the following data are displayed on page: 4, addresses: 18, 19.

Page	Address	Data
4	19	33 or B2
4	18	59 or 19

IC805 (A1) Playback System Check

9) Select page: 4, address: 11, set data: 10, and press the PAUSE button.
10) Select page: 4, address: 11, set data: 00, and press the PAUSE button.
11) Select page: 4, address: 13, set data: 04, and press the PAUSE button.
    (Data automatically returns to "00")
12) If IC805 (A1) playback system is normal, the following data are displayed on page: 4, addresses: 14, 15.

Page	Address	Data
4	15	7B
4	14	B5

IC401 (U1) Playback System Check

13) Select page: 4, address: 11, set data: 08, and press the PAUSE button.
14) Select page: 4, address: 42, set data: 01, and press the PAUSE button.
15) Select page: 4, address: 13, set data: 07, and press the PAUSE button.
    (Data automatically returns to "00")
16) Select page: 4, address: 42, set data: 00, and press the PAUSE button.
17) Select page: 4, address: 11, set data: 00, and press the PAUSE button.
18) If IC401 (U1) → IC200 (S1) playback system is normal, the following data are displayed on page: 4, addresses: 14, 15.

Page	Address	Data
4	15	1E
4	14	F2

19) If IC411 (D1) → IC401 (U1) playback system is normal, the following data are displayed on page: 4, addresses: 16, 17.

Page	Address	Data
4	17	D1
4	16	61

20) Perform "Record System Check" successively.

2. Record System Check

Note: Perform "Record System Check" successively (with BIST check tape in playback status)

1) Enter the following data.
Note: Press the PAUSE button each time the data is set.

Page	Address	Data
4	41	01
4	0F	02
4	0E	01
4	40	01
4	0F	0A
4	40	00
4	40	01
4	0F	0E
4	40	00
4	40	01
4	0F	8E
4	40	00

2) With the HOLD switch on adjusting remote commander turned ON, eject the BIST check tape, and insert a record tape instead.
3) Set the REC mode.

IC401 (U1) Record System Check

4) Select page: 4, address: 11, set data: 08, and press the PAUSE button.
5) Select page: 4, address: 42, set data: 01, and press the PAUSE button.
6) Select page: 4, address: 13, set data: 07, and press the PAUSE button.
(Data automatically returns to "00".)
7) Select page: 4, address: 42, set data: 00, and press the PAUSE button.
8) Select page: 4, address: 11, set data: 00, and press the PAUSE button.
9) If IC401 (U1) → IC411 (D1) record system is normal, the following data are displayed on page: 4, addresses: 16, 17.

Page	Address	Data
4	17	C5
4	16	80

IC411 (D1) Record System Check

10) Select page: 3, address: 01, set data: 0D, and press the PAUSE button.
11) Select page: 4, address: IC, set data: FF, and press the PAUSE button.
12) Select page: 4, address: 11, set data: 04, , and press the PAUSE button.
13) Select page: 4, address: 11, set data: 00, and press the PAUSE button.
14) Select page: 4, address: 13, set data: 03, and press the PAUSE button.
(Data automatically returns to "00")
15) If IC401 (U1) → IC411 (D1) record system is normal, the following data are displayed on page: 4, addresses: 14, 15.

Page	Address	Data
4	15	05
4	14	80

16) If IC411 (D1) → IC701 (IND1) record system is normal, the following data are displayed on page: 4, addresses: 16, 17.

Page	Address	Data
4	17	5E
4	16	BC

17) If IC805 (A1) → IC411 (D1) record system is normal, the following data are displayed on page: 4, addresses: 18, 19.

Page	Address	Data
4	19	76
4	18	B9

18) If IC411 (D1) → IC774 (DX) record system is normal, the following data are displayed on page: 4, addresses: 1A, 1B.

Page	Address	Data
4	1B	EF
4	1A	F7

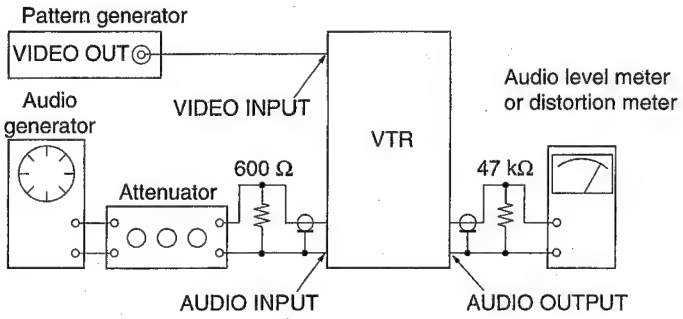
3-6. AUDIO SYSTEM ADJUSTMENTS

Unless spesified otherwise, set the switches as follows.

AUDIO NODE (Menu display) Fs48k
INPUT SELECT ..... VIDEO
AUDIO MONITOR CH-1/2
REC LEVEL L, R ..... Center

Note 1: Set AUDIO MODE at the SET UP menu of the menu screen.

Connection of Equipment



600 Ω : 270 (1-249-410-11) +330 (1-249-411-11)
47k Ω : 1-249-437-11

Fig. 5-3-37.

1. E-E Level Check

Mode	E-E
Signal	Audio: 1 kHz –6 dBv Signal Audio input terminal (Left and Right) Video: Color bar signal Video input terminal
Measurement point	Audio output terminal (Left and Right) (Pin output, Canon output)
Measuring Instrument	Audio level meter
Specified Value	Pin output: –6 ± 3 dBv Canon output: +12 ± 3 dBv (NTSC) +10 ± 3 dBv (PAL)

Checking method:

1) Check that the 1 kHz signal level satisfies the specified value.
2) Check that the number in the segment of the level meter (fluorescent display tube) that is lit is 7 for both the L and R channels.

2. Playback Level/Indicator Check

Mode	Playback
Signal	Audio check reference tape
Measurement point	Audio output terminal (Left and Right) (Pin output, Canon output)
Measuring Instrument	Audio level meter and frequency counter
Specified Value	32 kHz mode: 1 kHz signal should be output 48 kHz mode: 1 kHz signal level should be Pin output: + 6 ± 1 dBv Canon output: 22 to 24 dBv 44.1 kHz mode EMP ON: 7.35 kHz signal level is Pin output: –6 ± 1 dBv Canon output: 10 to 12 dBv for 1 kHz signal level in 48 kHz mode 44.1 kHz mode EMP ON: 7.35 kHz signal level is Pin output: 0 ± 1 dBv Canon output: 16 to 18 dBv for 1 kHz signal level in 48 kHz mode NS AUDIO lamp should be lit

Checking method:

1) Check that the playback signal level satisfies the specified value.
2) Check that the NS AUDIO lamp of fluorescent display tube is on.
3) Confirm that the number of lighting segments of the level meter (fluorescent display tube) is 9 in 32 kHz and 48 kHz modes, or 8 to 9 in 44.1 kHz mode.

3. Recording/Playback Check (Audio Lock Mode)

Mode	Recording/Playback (LINE input)
Signal	Audio: no signal
	Video: Color bar Video input terminal
Measurement point	Display data of page: 4, addresses: 50, 58
Measuring Instrument	of the adjusting remote commander
Specified Value	① After playback pause, the changes in the data after 5 frames have been sent continuously must be in the following order. "D4" → "D6" → "D6" → "D6" → "D6" → "D4" (NTSC) "D8" → "D8" → "D8" → "D8" → "D8" → "D8" (PAL) ② NS AUDIO lamp should be lit.

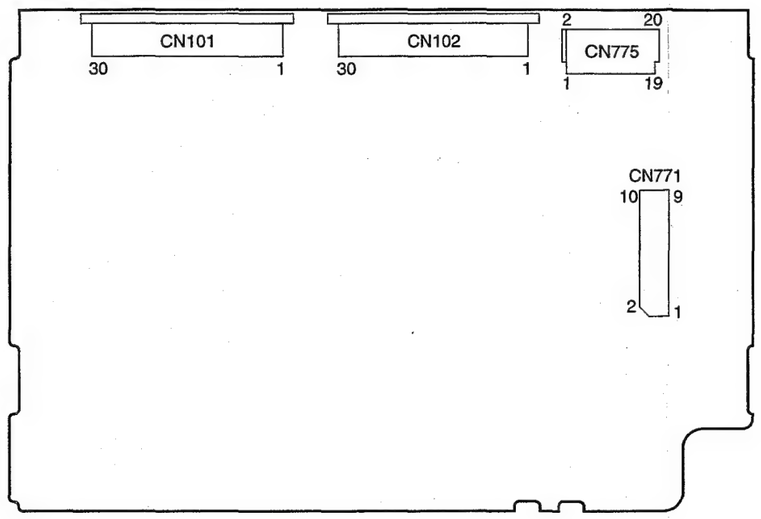
Note 1: Check that the AUDIO MODE (menu screen) is Fs48k.
Note 2: Send the frames using front panel button.

Checking method:

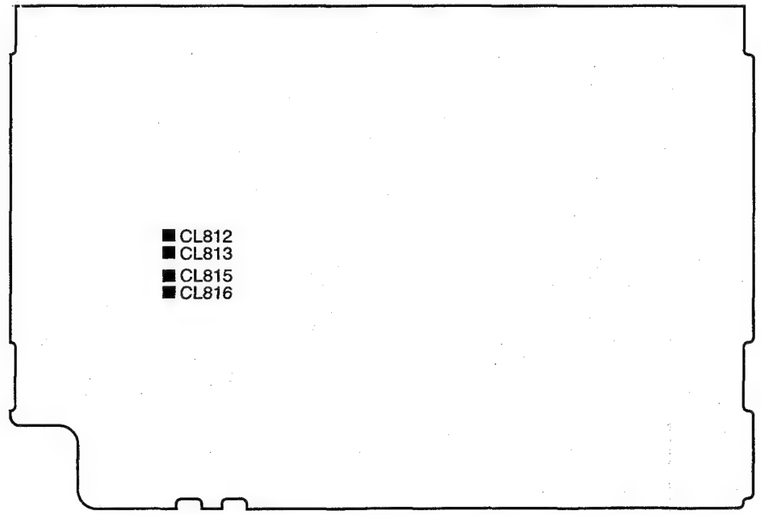
1) With no audio signal being input, record the color bar signal for about 1 minute.
2) Playback the recorded part, and set the playback pause mode.
3) Select page: 4, address: 50 using the adjusting remote commander.
4) Send the frames, so that the display data for page: 4, address: 50 is D4. (NTSC)
5) Send 5 frames continuously, and check that the display data of page: 4, address: 50 changes in the order specified.
6) Select page: 4, address: 58 using the adjusting remote commander, check that displayed data changes in specified order in the same way.
7) Exit the playback pause mode, playback the recorded part, and check that the NS AUDIO lamp (front panel) is off.

3-7. ARRANGEMENT DIAGRAM FOR ADJUSTMENT PARTS

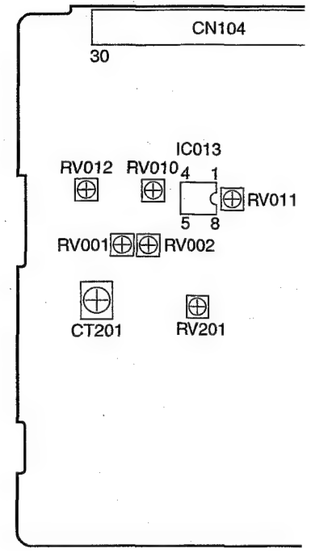
RP-228 BOARD (SIDE A)



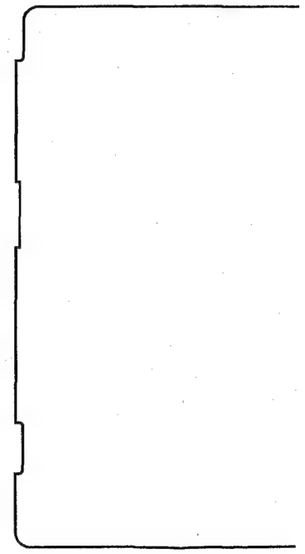
RP-228 BOARD (SIDE B)



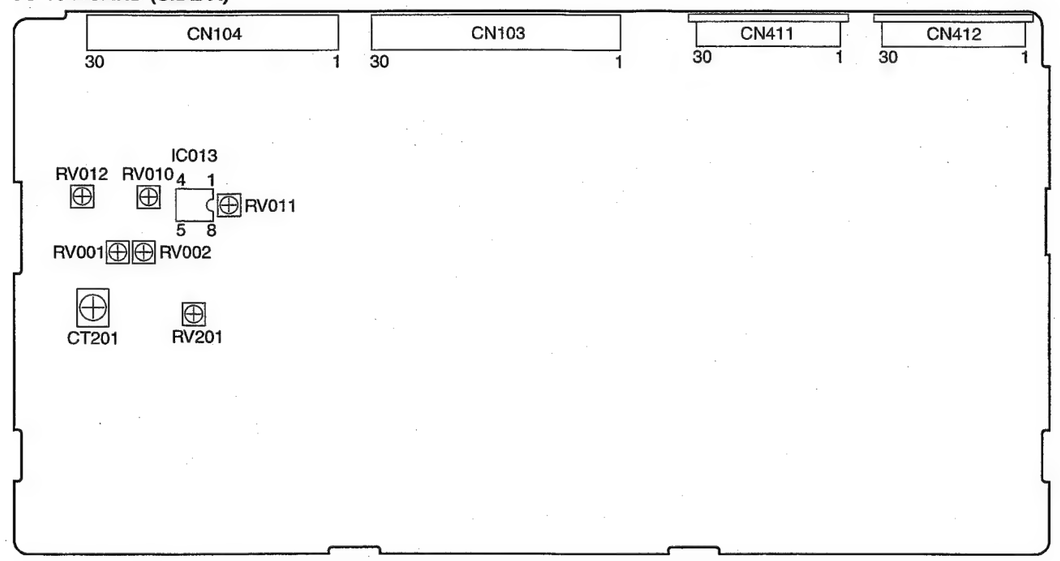
JC-19 BOARD (SIDE A)



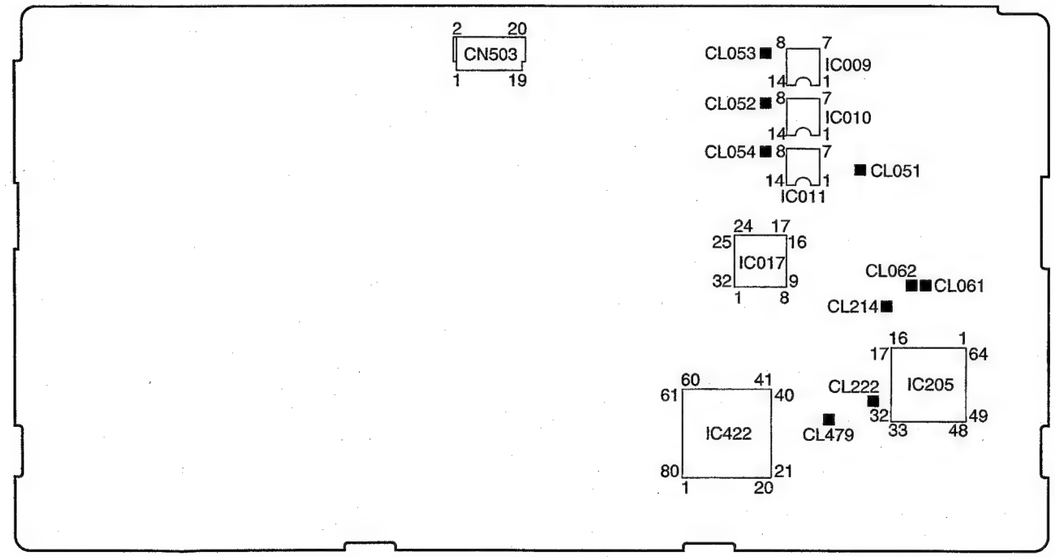
JC-19 BOARD (SIDE B)



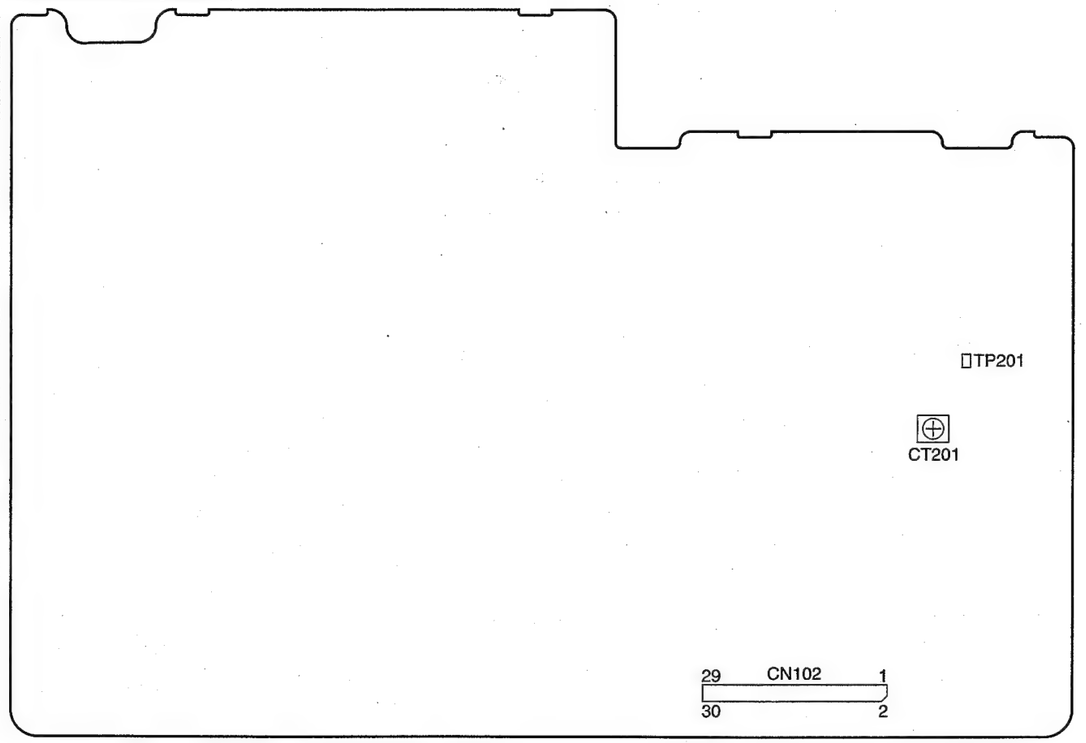
JC-19 BOARD (SIDE A)



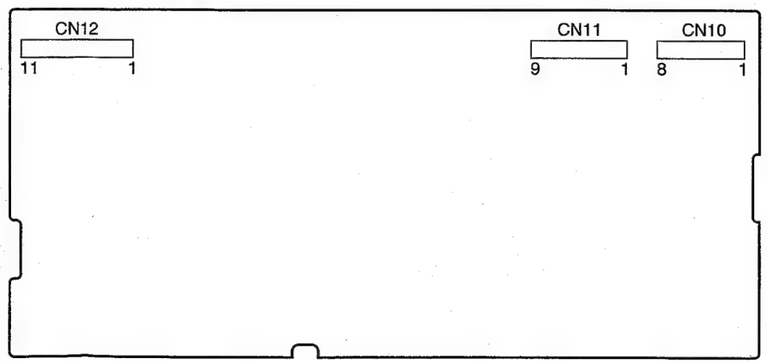
JC-19 BOARD (SIDE B)



VA-106 BOARD (SIDE A)



POWER BLOCK (U-2)



SECTION 6
REPAIR PARTS LIST

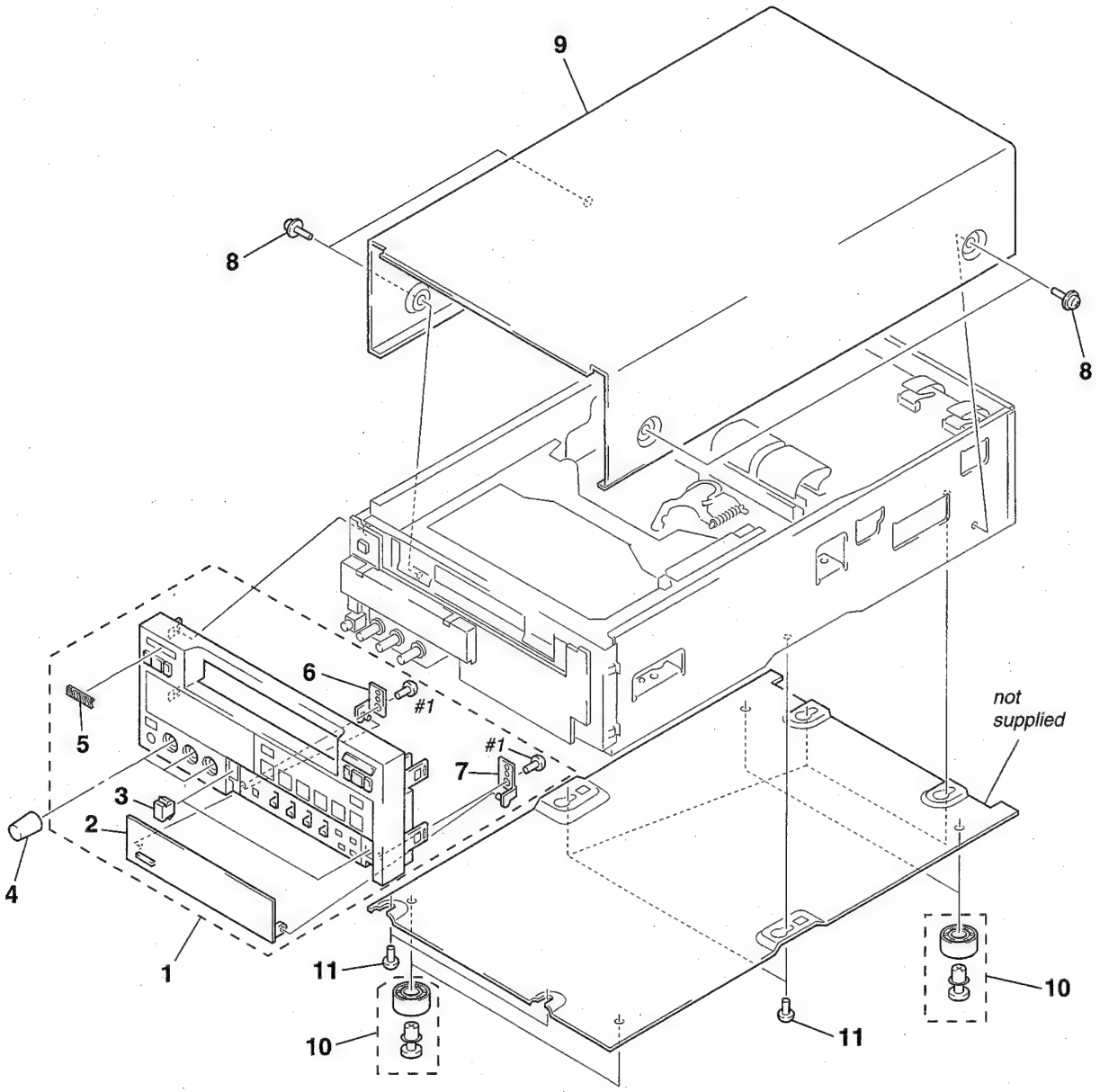
6-1. EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

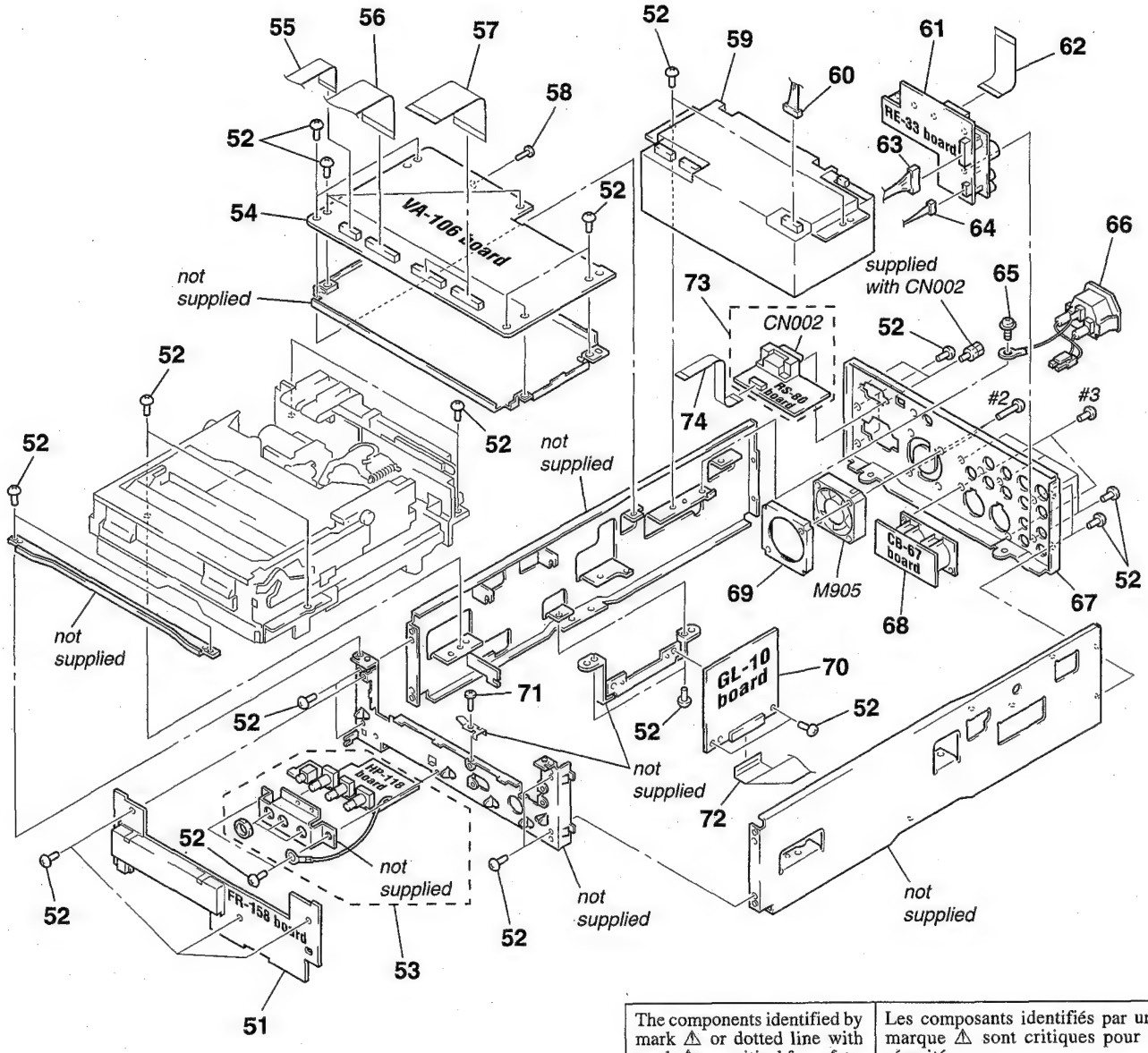
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

6-1-1. OVERALL ASSEMBLY



Ref. No.	Part No.	Description	Remark
1	X-3949-148-1	PANEL ASSY, FRONT (DSR-40)	
1	X-3949-151-1	PANEL ASSY (P), FRONT (DSR-40P)	
2	X-3949-149-1	DOOR ASSY (DSR-40)	
2	X-3949-152-1	DOOR ASSY (P) (DSR-40P)	
3	3-950-280-01	MAGNET	
4	3-956-976-01	KNOB, ROTARY	
5	4-942-567-01	EMBLEM (NO.4), SONY	
* 6	X-3948-057-1	HINGE (L) ASSY, DOOR	
* 7	X-3948-056-1	HINGE (R) ASSY, DOOR	
8	4-886-821-01	SCREW, M3 CASE	
* 9	3-987-158-01	CASE, UPPER	
10	3-987-171-01	FOOT (FF-004)	
11	3-970-608-41	SUMITITE (B3), +BV	

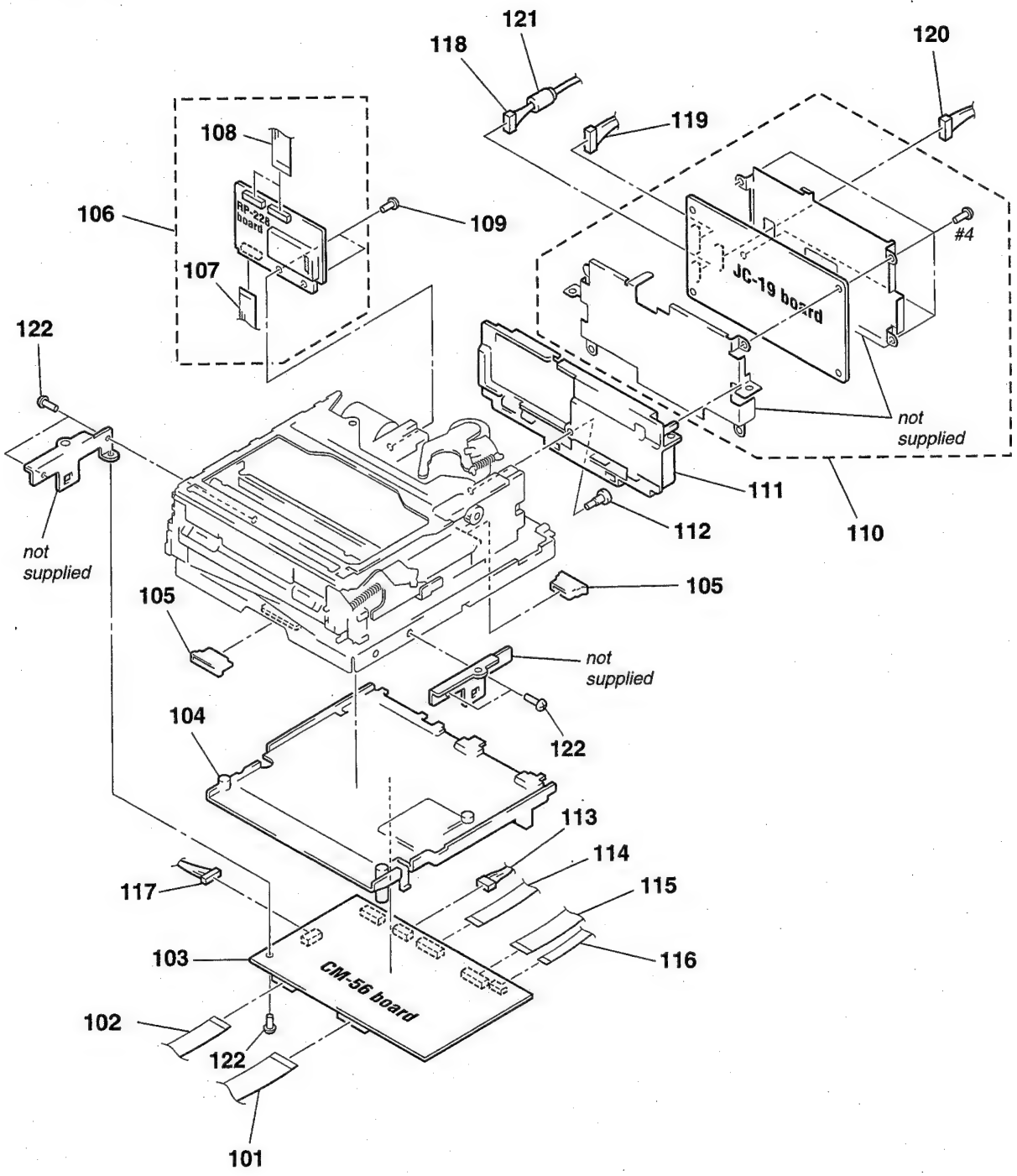
6-1-2. CHASSIS ASSEMBLY



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 51	A-7073-774-A	FR-158 BOARD, COMPLETE	
52	3-970-608-41	SUMITITE (B3), +BV	
* 53	A-7073-776-A	HP-118 BOARD, COMPLETE (DSR-40)	
* 53	A-7073-779-A	HP-118 BOARD, COMPLETE (DSR-40P)	
* 54	A-7067-206-A	VA-106 BOARD, COMPLETE (DSR-40)	
* 54	A-7067-208-A	VA-106 BOARD, COMPLETE (DSR-40P)	
55	1-790-556-11	CABLE, FLAT (FVH-5)	
56	1-782-825-11	CABLE, FLAT (FVF-8)	
57	1-782-824-11	CABLE, FLAT (FVJ-7)	
58	3-728-266-01	COVER, 2.5 JACK	
⚠59	1-468-377-11	POWER BLOCK (U-1/U-2) (DSR-40)	
⚠59	1-468-378-11	POWER BLOCK (U-1/U-2) (DSR-40P)	
60	1-959-583-11	HARNESS (VP-73)	
* 61	A-7073-775-A	RE-33 BOARD, COMPLETE	
62	1-790-557-11	CABLE, FLAT (FVR-12)	
63	1-959-585-11	HARNESS (HR-62)	
64	1-959-586-11	HARNESS (CR-111)	
65	3-975-291-01	SCREW (4X6)	
⚠66	1-958-585-11	HARNESS (AC-227)	
* 67	3-053-185-12	PANEL, REAR (DSR-40)	
* 67	3-053-185-22	PANEL, REAR (DSR-40P)	
* 68	A-7073-780-A	CB-67 BOARD, COMPLETE	
69	3-945-562-01	BRACKET, FAN	
* 70	A-7067-205-A	GL-10 BOARD, COMPLETE (DSR-40)	
* 70	A-7067-207-A	GL-10 BOARD, COMPLETE (DSR-40P)	
71	3-964-010-01	SCREW M2	
72	1-790-725-11	CABLE, FLAT (FVG-1)	
* 73	A-7073-778-A	RS-80 BOARD, COMPLETE (DSR-40)	
* 73	A-7073-781-A	RS-80 BOARD, COMPLETE (DSR-40P)	
74	1-782-822-11	CABLE, FLAT (FVR-9)	
CN002	1-573-005-21	CONNECTOR, D-SUB 9P	

6-1-3. MD BLOCK ASSEMBLY

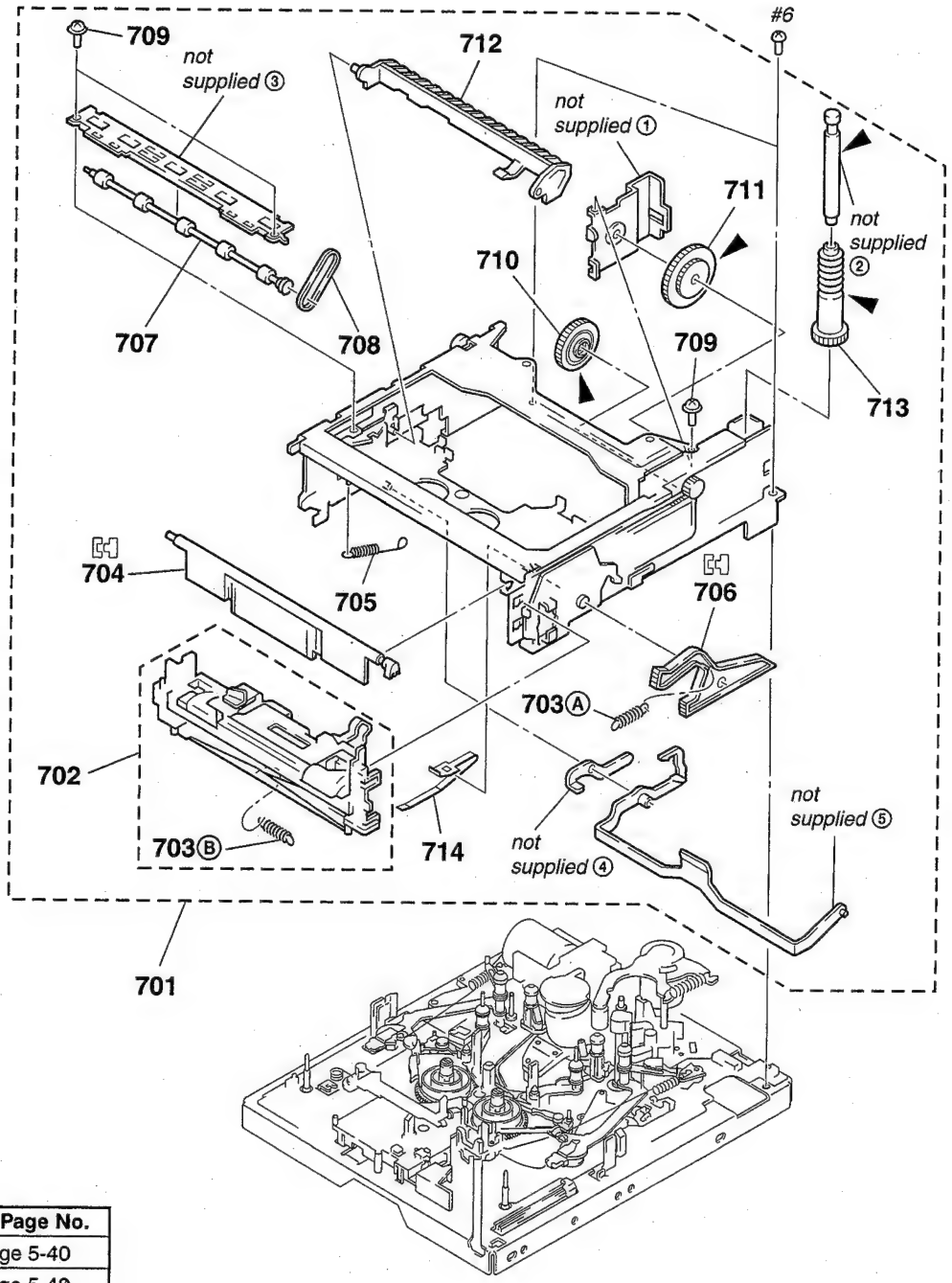


Ref. No.	Part No.	Description	Remark
101	1-776-148-11	CABLE, FLAT (FCM-11) 15P	
102	1-776-145-11	CABLE, FLAT (FCM-8) 16P	
* 103	A-7067-127-A	CM-56 BOARD, COMPLETE (DSR-40P)	
* 103	A-7067-131-A	CM-56 BOARD, COMPLETE (DSR-40)	
* 104	3-987-138-01	FRAME, MD	
105	1-764-137-11	CONNECTOR, TRANSLATION 15P	
* 106	A-7067-128-A	RP-228 BOARD, COMPLETE (DSR-40P)	
* 106	A-7067-132-A	RP-228 BOARD, COMPLETE (DSR-40)	
107	1-776-149-11	CABLE, FLEXIBLE FLAT 30P	
108	1-783-376-11	CABLE, FLEXIBLE FLAT (FFC-245)	
109	3-732-817-01	SCREW (2X4.5), TAPPING	
* 110	A-7067-126-A	JC-19 BOARD, COMPLETE (DSR-40P)	
* 110	A-7067-130-A	JC-19 BOARD, COMPLETE (DSR-40)	

Ref. No.	Part No.	Description	Remark
* 111	3-987-133-01	SUPPORT, JC	
112	3-741-948-01	SCREW (3), SPECIAL (+) TAPPING	
113	1-958-288-11	HARNESS (CM-130)	
114	1-776-151-11	CABLE, FLAT (FCM-12) 14P	
115	1-776-147-11	CABLE, FLAT (FCM-10) 15P	
116	1-776-146-11	CABLE, FLAT (FCM-9) 9P	
117	1-958-057-11	HARNESS (CP-79)	
118	1-958-061-11	HARNESS (VJ-103)	
119	1-958-058-11	HARNESS (JP-55)	
120	1-959-584-11	HARNESS (JH-51)	
121	1-543-793-11	FILTER, CLAMP (FERRITE CORE)	
122	3-970-608-41	SUMITITE (B3), +BV	

6-1-4. FL CASETTE COMPARTMENT ASSEMBLY

NOTE FOR INSTALLATION
►: Place for grease (SG-055G: 7-651-000-09)
[-]: Take note of the position and specified direction.



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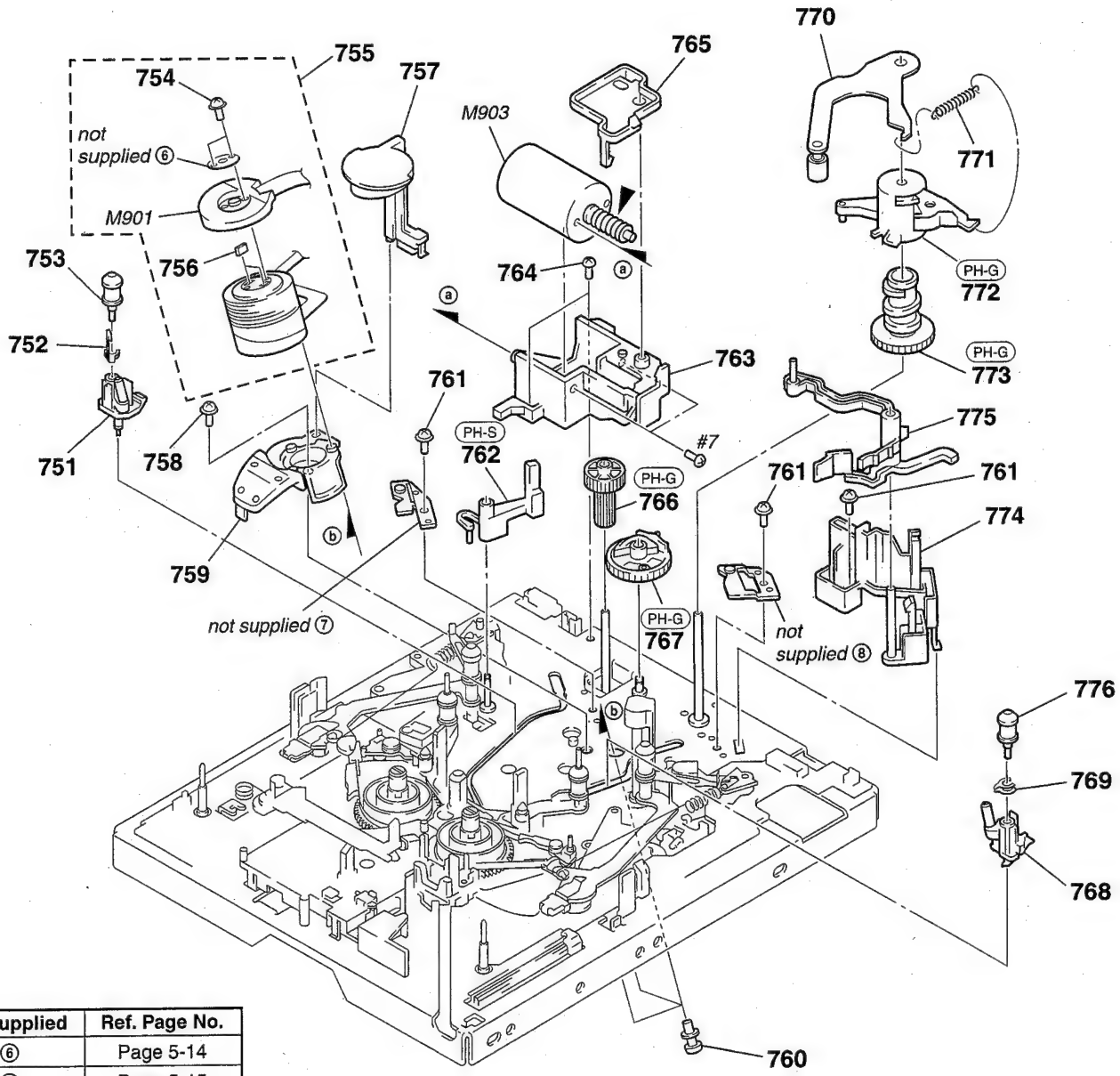
①	Page 5-40
②	Page 5-40
③	Page 5-38
④	Page 5-41
⑤	Page 5-41

Ref. No.	Part No.	Description	Remark
701	A-7092-644-A	FL BLOCK ASSY	(5-2)
702	A-7092-647-A	SLOAT BLOCK ASSY, C	(5-41)
703	3-967-604-01	SPRING (DB), TENSION	(Ⓐ: 5-40/Ⓑ: 5-41)
704	3-967-655-01	DOOR, C	(5-40)
705	3-967-613-01	SPRING (HS), TENSION COIL	(5-41)
706	3-967-777-01	ARM, DAMPER	(5-40)
707	X-3945-780-1	SHAFT ASSY, ROLLER	(5-38)
708	3-967-816-01	BELT, ROLLER	(5-38)
709	3-947-503-01	SCREW (M1.4X2.5)	
710	3-967-591-01	GEAR (B)	(5-40)
711	3-967-590-01	GEAR (A)	(5-40)
712	3-967-653-01	OPENER, LID	(5-39)
713	3-967-592-01	WORM, C	(5-40)
714	3-967-636-01	SPRING, SHIFT PLATE	(5-41)

6-1-5. MECHANISM CHASSIS ASSEMBLY (1) (TOP SIDE VIEW (1))

NOTE FOR INSTALLATION
(PH-): Phase adjustment
►: Place for grease (SG-055G: 7-651-000-09)



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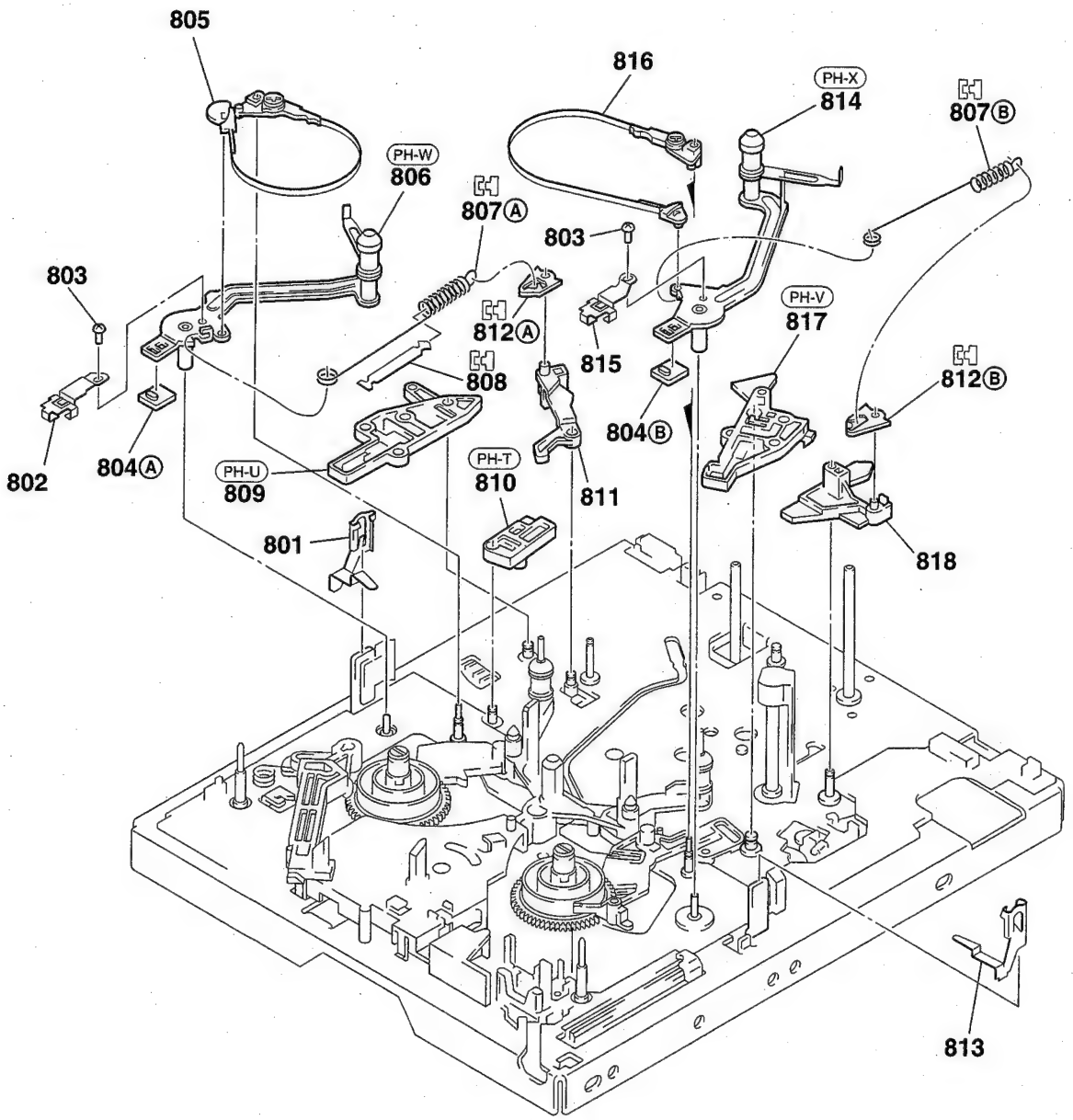
⑥	Page 5-14
⑦	Page 5-15
⑧	Page 5-16

Ref. No.	Part No.	Description	Ref. page No.
751	X-3945-801-1	BASE ASSY, TG3/4	(5-31)
752	3-967-740-01	SPRING, TG3 LOCK	(5-26, 5-33)
753	X-3947-441-1	ROLLER ASSY, TG3	(5-26)
754	3-703-816-74	SCRWE (M1.4X4.5), SPECIAL HEAD	
755	A-7044-015-A	DRUM ASSY (DEH-08B-R)	(5-14)
756	1-770-363-11	ELASTIC CONNECTOR	(5-14)
757	3-967-785-01	STOPPER, TAPE	(5-14)
758	3-967-728-01	SCREW (M2 X 5)	
759	3-967-817-01	BASE, DRUM	(5-14)
760	A-7040-449-A	SCREW ASSY	(5-14)
761	3-954-285-01	SCREW (M1.4X0.2)	
762	X-3945-798-1	ARM ASSY, TC	(5-15)
763	3-967-675-01	HOLDER, LM	(5-15)
764	3-732-817-01	SCREW (2X4.5), TAPPING	

Ref. No.	Part No.	Description	Ref. page No.
765	3-967-751-01	COVER, LM	(5-15)
766	3-967-767-01	WHEEL, LM WORM	(5-15)
767	3-967-768-01	GEAR, PINCH DRIVING	(5-15)
768	X-3945-803-1	BASE ASSY, TG5/6	(5-33)
769	3-967-741-01	SPRING, TG6 LOCK	(5-26, 5-33)
770	X-3945-810-1	ARM ASSY, PINCH	(5-16)
771	3-967-645-01	SPRING (PINCH), TENSION COIL	(5-16)
772	3-967-676-01	LIMITER, PINCH	(5-16)
773	3-967-769-01	GEAR, PINCH CAM	(5-16)
774	3-967-679-01	RETAINER, PINCH	(5-16)
775	3-967-795-03	ARM, HC	(5-16)
776	X-3945-802-1	ROLLER ASSY, TG6	(5-26)
M901	X-3944-897-2	FPC ASSY, MOTOR	(5-14)
M903	X-3945-784-1	MOTOR ASSY, LM (LOADING)	(5-15)

6-1-6. MECHANISM CHASSIS ASSEMBLY (2) (TOP SIDE VIEW (2))

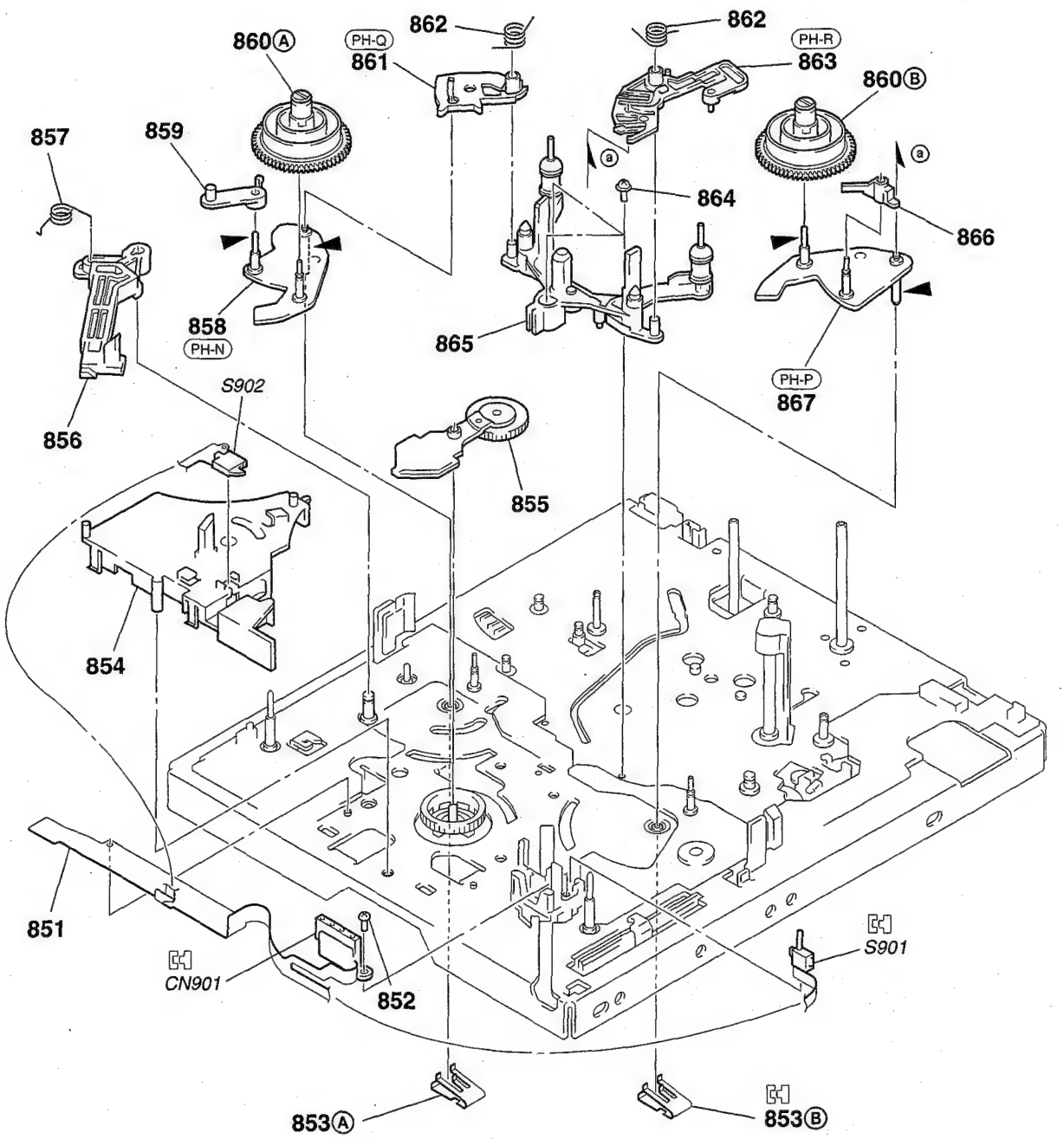
NOTE FOR INSTALLATION
(PH-): Phase adjustment
: Take note of the position and specified direction.



Ref. No.	Part No.	Description	Ref. page No.
801	3-967-809-01	RETAINER, TG2	(5-19)
802	3-967-715-01	SPRING, TG2 PLATE	(5-19)
803	3-728-148-11	SCREW (M1.4X2.5), SPECIAL HEAD	
804	3-967-714-01	MAGNET, ET (Ⓐ: 5-19/Ⓑ: 5-520)	
805	X-3945-792-1	BAND ASSY, S TENSION REGULATOR	(5-19)
806	X-3945-805-1	ARM ASSY, TG2	(5-19)
807	3-967-726-01	SPRING (TG2), TENSION COIL (5-18, Ⓐ: 5-9/Ⓑ:5-10)	
808	3-967-685-01	SHEET, DAMPER	(5-18)
809	X-3945-782-1	ARM ASSY, TG2 LOAD	(5-19)
810	3-967-764-01	ARM, TG2 SELECTION	(5-18)
811	3-967-807-01	HOOK, TG2 SPRING	(5-18)
812	3-967-724-01	ADJUSTOR, SPRING (5-18, Ⓐ: 5-9/Ⓑ: 5-10)	
813	3-967-810-01	RETAINER, TG7	(5-20)
814	X-3945-806-1	ARM ASSY, TG7	(5-20)
815	3-967-694-01	SPRING, TG7 PLATE	(5-20)
816	X-3945-793-1	BAND ASSY, T TENSION REGULATOR	(5-20)
817	X-3945-783-1	ARM ASSY, TG7 LOAD	(5-20)
818	3-967-808-01	HOOK, TG7 SPRING	(5-18)

6-1-7. MECHANISM CHASSIS ASSEMBLY (3) (TOP SIDE VIEW (3))

NOTE FOR INSTALLATION
(PH-): Phase adjustment
►: Place for grease (SG-055G: 7-651-000-09)
[H]: Take note of the position and specified direction.

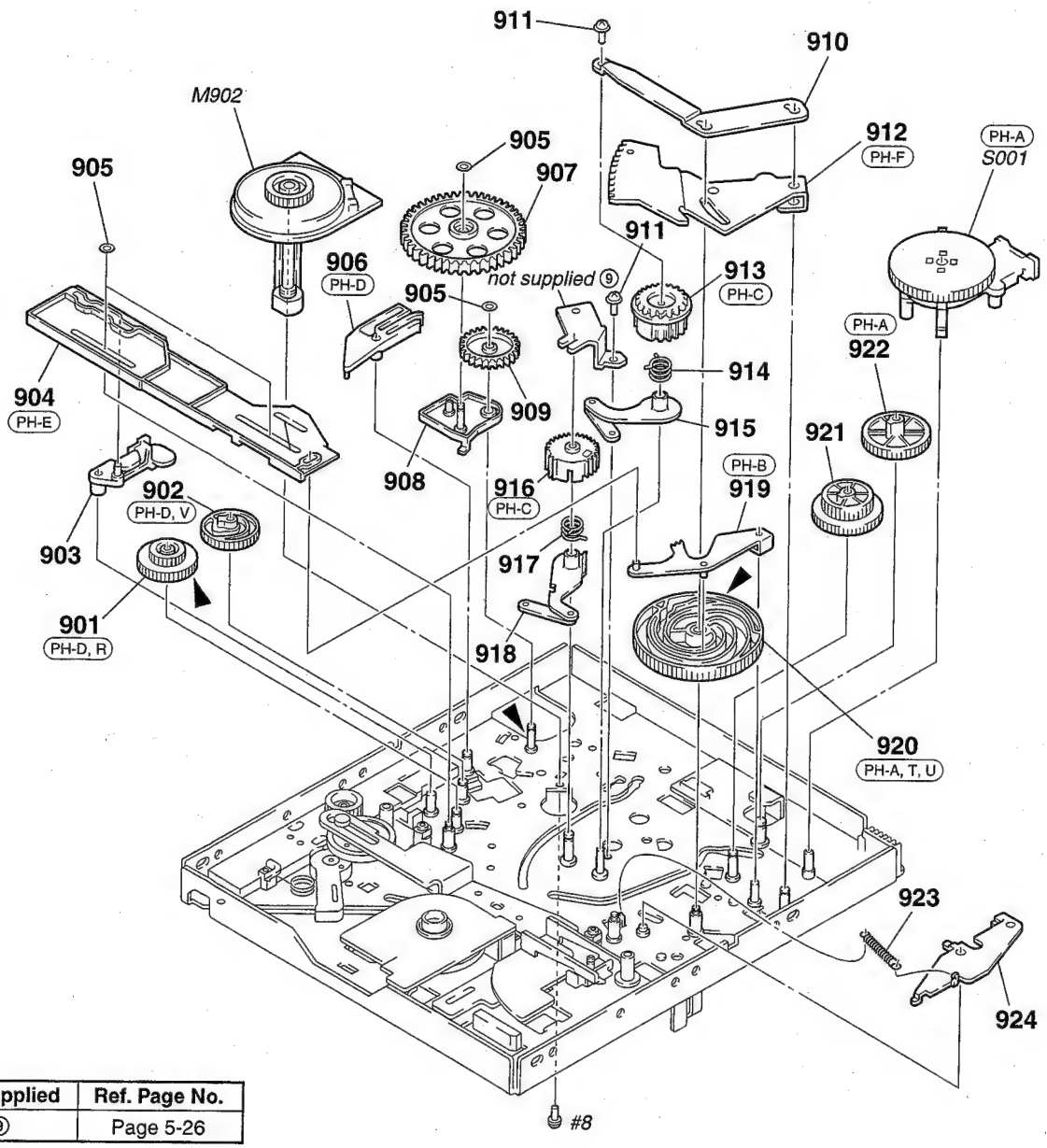


Ref. No.	Part No.	Description	Ref. page No.
851	1-658-990-11	FP-406 FLEXIBLE BOARD	
852	3-318-201-11	SCREW (B) (1.4X3), TAPPING	
853	3-967-684-01	SPRING, PLATE (Ⓐ: 5-23/Ⓑ: 5-24)	
854	3-967-692-01	GUARD, GOOSENECK	(5-17)
855	X-3945-807-1	ARM ASSY, GOOSENECK	(5-17)
856	3-967-784-01	ARM, RL	(5-17)
857	3-967-683-01	SPRING, RL PRESS	(5-17)
858	X-3945-814-1	PLATE ASSY, S REEL	(5-23)
859	3-967-680-01	LINK, RL	(5-17)
860	A-7040-441-A	TABLE BLOCK ASSY, REEL (Ⓐ: 5-21/Ⓑ: 5-22)	

Ref. No.	Part No.	Description	Ref. page No.
861	3-967-776-01	BRAKE, S	(5-25)
862	3-967-673-01	SPRING, S BRAKE	(5-25)
863	3-967-775-01	RATCHET, T	(5-25)
864	3-947-503-01	SCREW (M1.4X2.5)	
865	X-3945-804-1	BASE ASSY, TG18	(5-25)
866	3-967-725-01	HOLDER, T REEL	(5-22)
867	X-3945-815-1	PLATE ASSY, T REEL	(5-24)
CN901	1-770-312-21	CONNECTOR 4P	(5-35)
S901	1-762-551-11	SWITCH, PUSH (REC PROOF)	(5-35)
S902	1-572-288-11	SWITCH, PUSH (C IN SW)	(5-17)

6-1-8. MECHANISM CHASSIS ASSEMBLY (4) (BOTTOM SIDE VIEW (1))

NOTE FOR INSTALLATION
(PH-): Phase adjustment
►: Place for grease (SG-055G: 7-651-000-09)



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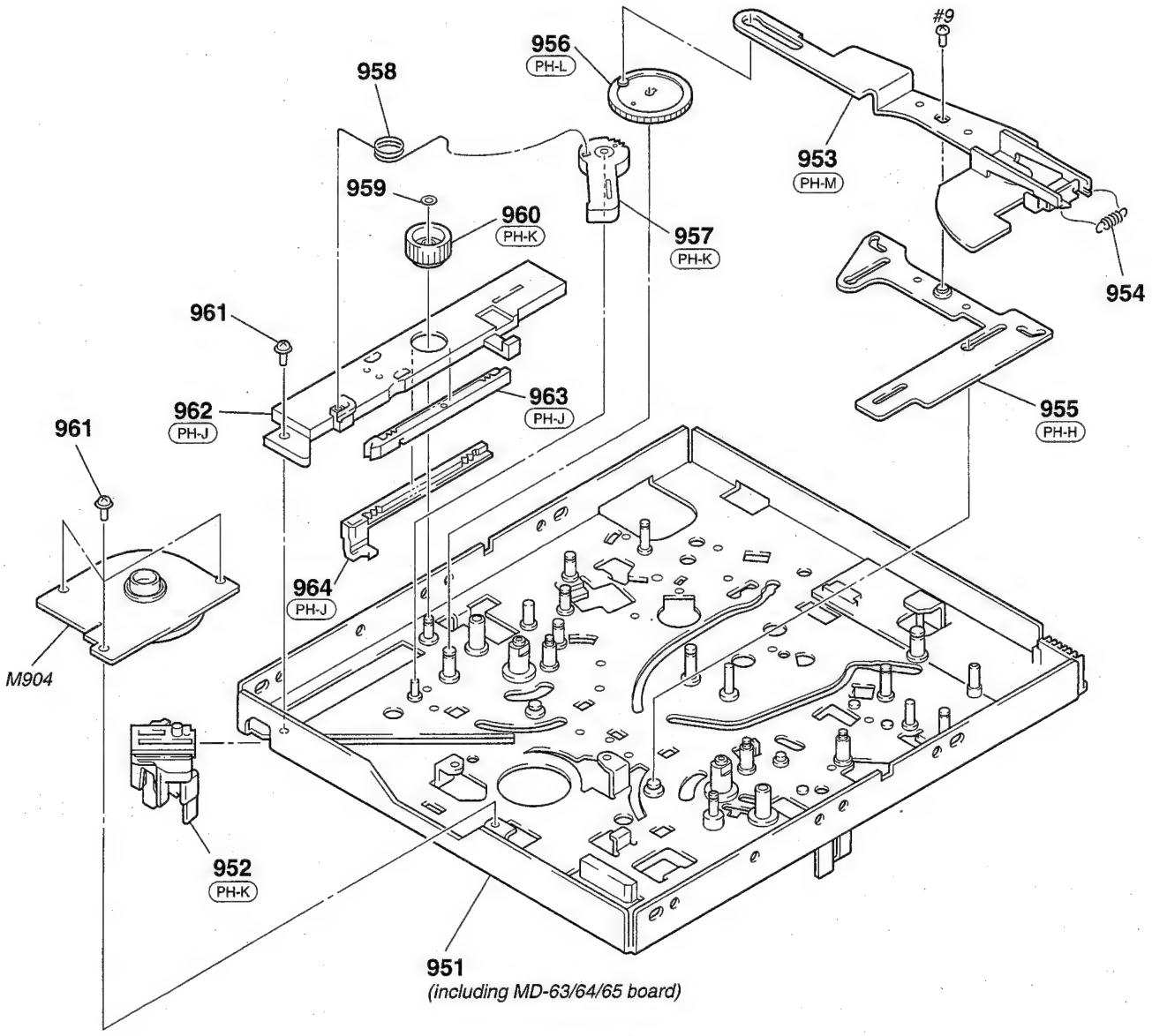
⑨	Page 5-26

Ref. No.	Part No.	Description	Ref. page No.
901	3-967-678-01	GEAR, T CAM	(5-28)
902	3-967-756-01	GEAR, TG7 CAM	(5-28)
903	3-967-763-01	ARM, TG7 SELECTION	(5-28)
904	3-967-677-01	SLIDER, M	(5-28)
905	3-669-465-01	WASHER (1.5), STOPPER	
906	3-967-829-01	ARM, FL SELECTION	(5-28)
907	3-967-828-01	GEAR, FL JOINT	(5-26)
908	X-3945-813-1	ARM ASSY, FL JOINT	(5-27)
909	3-967-830-01	GEAR, FL RELAY	(5-27)
910	3-967-755-01	RETAINER, GL ARM	(5-28)
911	3-947-503-01	SCREW (M1.4X2.5)	
912	3-967-754-01	ARM, GL	(5-28)
913	3-967-790-01	GEAR, TG3/4	(5-31)
914	3-967-746-01	SPRING, TG3/4 LIMITER	(5-31)
915	X-3945-794-1	ARM ASSY, TG3/4	(5-31)
916	3-967-792-01	GEAR, TG5/6	(5-33)
917	3-967-748-01	SPRING, TG5/6 LIMITER	(5-33)
918	X-3945-795-1	ARM ASSY, TG5/6	(5-33)
919	3-967-753-01	ARM, M SLIDER	(5-28)
920	3-967-819-01	CAM, MAIN	(5-29)
921	3-967-765-01	GEAR, TC	(5-27)
922	3-967-766-01	GEAR, RELAY	(5-27)
923	3-967-633-01	SPRING (TG2SL), TENSION COIL	(5-29)
924	X-3945-781-1	ARM ASSY, TG2 SL	(5-29)
M902	8-835-545-01	MOTOR, DC SCD11A/J-N (CAPSTAN)	(5-26)
S001	1-762-550-11	SWITCH, ROTARY (MODE)	(5-27)

6-1-9. MECHANISM CHASSIS ASSEMBLY (5) (BOTTOM SIDE VIEW (2))

NOTE FOR INSTALLATION
(PH-): Phase adjustment



Ref. No.	Part No.	Description	Ref. page No.
* 951	A-7040-431-A	CHASSIS BLOCK ASSY, MECHANICAL (including MD-63/64/65 board)	
952	3-967-690-01	HOLDER, MIC	(5-35)
953	X-3945-789-1	ARM ASSY, RS	(5-34)
954	3-967-667-01	TENSION COIL SPRING	(5-34)
955	X-3945-788-1	LINK ASSY, PLATE	(5-37)
956	X-3945-787-1	GEAR ASSY, RS	(5-34)
957	3-967-783-01	LEVER, MIC	(5-34)
958	3-967-682-01	SPRING, MIC PRESS	(5-34)
959	3-669-465-01	WASHER (1.5), STOPPER	
960	3-967-681-01	GEAR, RACK JOINT	(5-35)
961	3-947-503-01	SCREW (M1.4X2.5)	
962	3-967-689-01	HOLDER, RACK	(5-35)
963	3-967-771-01	RACK (SC)	(5-35)
964	3-967-770-01	RACK (LC)	(5-35)
M904	8-835-537-01	MOTOR, DC SRD11A/J-N (REEL)	(5-34)

6-2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description				Remark
*	A-7073-780-A	CB-67 BOARD, COMPLETE				
		**********				
		(Ref.No. 6,000 Series)				
		< CONNECTOR >				
* CN101	1-564-005-11	PIN, CONNECTOR 6P				
CN102	1-750-785-11	CONNECTOR (XLR TYPE) 3P (AUDIO OUTPUT)				
		< JUMPER RESISTOR >				
JS001	1-216-295-91	SHORT	0			
JS004	1-216-295-91	SHORT	0			
JS006	1-216-295-91	SHORT	0			
JS009	1-216-295-91	SHORT	0			
*	A-7067-131-A	CM-56 BOARD, COMPLETE (DSR-40)				
*	A-7067-127-A	CM-56 BOARD, COMPLETE (DSR-40P)				
		**********				
		(Ref.No. 2,000 Series)				
		< CAPACITOR >				
C001	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C004	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C005	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C006	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C007	1-165-319-11	CERAMIC CHIP	0.1uF		50V	
C009	1-126-206-11	ELECT CHIP	100uF	20%	6.3V	
C011	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C017	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V	
C018	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C019	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C020	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C021	1-165-319-11	CERAMIC CHIP	0.1uF		50V	
C022	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C024	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V	
C025	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C026	1-165-319-11	CERAMIC CHIP	0.1uF		50V	
C027	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C028	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V	
C029	1-165-319-11	CERAMIC CHIP	0.1uF		50V	
C030	1-163-031-11	CERAMIC CHIP	0.01uF		50V	
C031	1-165-319-11	CERAMIC CHIP	0.1uF		50V	
C032	1-126-193-11	ELECT	1uF	20%	50V	
C034	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C035	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V	
C036	1-165-319-11	CERAMIC CHIP	0.1uF		50V	
C038	1-163-031-11	CERAMIC CHIP	0.01uF		50V	
C039	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C040	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C041	1-163-035-00	CERAMIC CHIP	0.047uF		50V	
C042	1-163-257-11	CERAMIC CHIP	180PF	5%	50V	
C046	1-165-319-11	CERAMIC CHIP	0.1uF		50V	
C047	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C048	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C049	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C051	1-165-319-11	CERAMIC CHIP	0.1uF		50V	
C052	1-126-193-11	ELECT	1uF	20%	50V	
C053	1-126-397-11	ELECT	33uF	20%	25V	
C054	1-127-530-11	ELECT	22uF	20%	20V	
C055	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V	
C056	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C058	1-127-530-11	ELECT	22uF	20%	20V	
C063	1-164-336-11	CERAMIC CHIP	0.33uF		25V	
C066	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	
C067	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	
C068	1-163-031-11	CERAMIC CHIP	0.01uF		50V	
C073	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	
C075	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	
C076	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	
C078	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C079	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C080	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C081	1-165-319-11	CERAMIC CHIP	0.1uF		50V	
C082	1-163-031-11	CERAMIC CHIP	0.01uF		50V	
C083	1-127-530-11	ELECT	22uF	20%	20V	
C086	1-163-031-11	CERAMIC CHIP	0.01uF		50V	
C087	1-127-530-11	ELECT	22uF	20%	20V	
C088	1-126-193-11	ELECT	1uF	20%	50V	
C090	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V	
C091	1-163-031-11	CERAMIC CHIP	0.01uF		50V	
C092	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	
C093	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C094	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C095	1-163-031-11	CERAMIC CHIP	0.01uF		50V	
C096	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C099	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V	

Ref. No.	Part No.	Description			Remark
C101	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C102	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C103	1-126-204-11	ELECT CHIP	47uF	20%	16V
C104	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C105	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C106	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C107	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C108	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C111	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C112	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C113	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C115	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C117	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C118	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C119	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C120	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C121	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C122	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C123	1-124-779-00	ELECT CHIP	10uF	20%	16V
C126	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C128	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C129	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C133	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C504	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C505	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C506	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C508	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C509	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C510	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C511	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C512	1-126-193-11	ELECT	1uF	20%	50V
C513	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C514	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C515	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
		< CONNECTOR >			
CN001	1-770-699-11	CONNECTOR, FFC/FPC 16P			
* CN002	1-691-551-11	PIN, CONNECTOR (SMD) 8P			
CN003	1-750-345-11	CONNECTOR, FFC/EPC (ZIF) 30P			
* CN004	1-564-033-11	PIN, CONNECTOR 8P			
CN005	1-770-692-11	CONNECTOR, FFC/FPC 9P			
* CN006	1-691-074-11	HOUSING, CONNECTOR 15P			
* CN007	1-691-074-11	HOUSING, CONNECTOR 15P			
CN008	1-770-697-11	CONNECTOR, FFC/FPC 14P			
		< DIODE >			
D001	8-719-026-23	DIODE MA786-TX			
D002	8-719-106-53	DIODE RD10M-T1B			
D004	8-719-938-78	DIODE SB10-05PCP-TD			
D011	8-719-026-23	DIODE MA786-TX			
D012	8-719-026-23	DIODE MA786-TX			
D501	8-719-938-78	DIODE SB10-05PCP-TD			
D502	8-719-108-24	DIODE MA151A-TX			
		< FUSE >			
⚠F001	1-532-777-21	FUSE, MICRO (SECONDARY) (1.25A) (DSR-40)			

Ref. No.	Part No.	Description	Remark
		< FILTER >	
FL001	1-233-351-21	FILTER, BAND PASS	
FL002	1-233-350-21	FILTER, BAND PASS	
		< IC >	
IC001	8-759-062-66	IC TC7S66F(TE85R)	
IC002	8-759-235-19	IC TC74HC08AF(EL)	
IC003	8-752-888-43	IC CXP912032-073R-T6	
IC005	8-759-327-00	IC CXA8044Q-T4	
IC006	8-759-085-67	IC uPC339G2-E2	
IC008	8-759-186-44	IC TC74VHC125F(EL)	
IC009	8-759-182-89	IC BA6219BFP-Y-E2	
IC011	8-759-148-05	IC CXA8010M-E1	
IC012	8-759-945-17	IC MB3775PF-G-BND-ER	
IC014	8-759-510-73	IC BA10393F-E2	
IC016	8-759-510-71	IC BA10358F-E2	
IC017	8-759-011-65	IC TC74HC4053AF(EL)	
IC018	8-759-085-67	IC uPC339G2-E2	
IC019	8-759-510-71	IC BA10358F-E2	
IC021	8-759-335-42	IC CXA1793N-E2	
IC022	8-759-339-61	IC LB1897D	
IC501	8-759-098-24	IC PQ30RV11	
IC503	8-759-339-61	IC LB1897D	
		< COIL >	
L003	1-412-282-41	INDUCTOR 470uH	
L004	1-414-398-11	INDUCTOR 10uH	
L005	1-414-398-11	INDUCTOR 10uH	
L006	1-414-398-11	INDUCTOR 10uH	
L007	1-414-402-11	INDUCTOR 47uH	
L008	1-424-522-21	INDUCTOR 10uH	
L010	1-424-522-21	INDUCTOR 10uH	
L011	1-409-535-41	INDUCTOR 100uH	
L013	1-424-524-21	INDUCTOR 47uH	
L014	1-414-402-11	INDUCTOR 47uH	
L501	1-414-402-11	INDUCTOR 47uH	
L502	1-414-402-11	INDUCTOR 47uH	
		< IC LINK >	
⚠PS001	1-532-840-21	LINK, IC (1.25A) (DSR-40P)	
		< TRANSISTOR >	
Q001	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q002	8-729-421-19	TRANSISTOR UN2213-TX	
Q003	8-729-010-25	TRANSISTOR MSD601-RT1	
Q004	8-729-421-22	TRANSISTOR UN2211-TX	
Q008	8-729-010-25	TRANSISTOR MSD601-RT1	
Q009	8-729-010-25	TRANSISTOR MSD601-RT1	
Q012	8-729-208-96	TRANSISTOR 2SA1242-Y(TE16L)	
Q014	8-729-421-19	TRANSISTOR UN2213-TX	
Q500	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q501	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	
Q502	8-729-208-96	TRANSISTOR 2SA1242-Y(TE16L)	
Q503	8-729-421-19	TRANSISTOR UN2213-TX	
Q504	8-729-421-19	TRANSISTOR UN2213-TX	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

CM-56

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R001	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R002	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R003	1-216-015-00	METAL CHIP	39	5%	1/10W
R005	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R006	1-216-089-91	RES,CHIP	47K	5%	1/10W
R009	1-216-049-91	RES,CHIP	1K	5%	1/10W
R010	1-216-089-91	RES,CHIP	47K	5%	1/10W
R011	1-216-089-91	RES,CHIP	47K	5%	1/10W
R012	1-216-089-91	RES,CHIP	47K	5%	1/10W
R015	1-216-295-91	SHORT	0		
R016	1-216-089-91	RES,CHIP	47K	5%	1/10W
R017	1-216-295-91	SHORT	0		
R018	1-216-089-91	RES,CHIP	47K	5%	1/10W
R019	1-216-295-91	SHORT	0		
R020	1-216-093-91	RES,CHIP	68K	5%	1/10W
R021	1-216-089-91	RES,CHIP	47K	5%	1/10W
R026	1-216-049-91	RES,CHIP	1K	5%	1/10W
R027	1-216-089-91	RES,CHIP	47K	5%	1/10W
R028	1-216-049-91	RES,CHIP	1K	5%	1/10W
R029	1-216-049-91	RES,CHIP	1K	5%	1/10W
R030	1-216-049-91	RES,CHIP	1K	5%	1/10W
R032	1-216-049-91	RES,CHIP	1K	5%	1/10W
R033	1-216-049-91	RES,CHIP	1K	5%	1/10W
R035	1-216-025-91	RES,CHIP	100	5%	1/10W
R036	1-216-025-91	RES,CHIP	100	5%	1/10W
R039	1-216-075-00	METAL CHIP	12K	5%	1/10W
R040	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R046	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R050	1-216-077-00	METAL CHIP	15K	5%	1/10W
R051	1-216-073-00	METAL CHIP	10K	5%	1/10W
R052	1-216-089-91	RES,CHIP	47K	5%	1/10W
R053	1-216-049-91	RES,CHIP	1K	5%	1/10W
R054	1-216-295-91	SHORT	0		
R055	1-216-049-91	RES,CHIP	1K	5%	1/10W
R059	1-216-043-91	RES,CHIP	560	5%	1/10W
R060	1-216-049-91	RES,CHIP	1K	5%	1/10W
R061	1-216-049-91	RES,CHIP	1K	5%	1/10W
R063	1-216-049-91	RES,CHIP	1K	5%	1/10W
R064	1-216-049-91	RES,CHIP	1K	5%	1/10W
R066	1-216-025-91	RES,CHIP	100	5%	1/10W
R067	1-216-073-00	METAL CHIP	10K	5%	1/10W
R069	1-216-085-00	METAL CHIP	33K	5%	1/10W
R070	1-216-073-00	METAL CHIP	10K	5%	1/10W
R071	1-216-025-91	RES,CHIP	100	5%	1/10W
R075	1-216-049-91	RES,CHIP	1K	5%	1/10W
R076	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R077	1-216-025-91	RES,CHIP	100	5%	1/10W
R078	1-216-049-91	RES,CHIP	1K	5%	1/10W
R079	1-216-073-00	METAL CHIP	10K	5%	1/10W
R080	1-216-025-91	RES,CHIP	100	5%	1/10W
R081	1-216-049-91	RES,CHIP	1K	5%	1/10W
R082	1-216-073-00	METAL CHIP	10K	5%	1/10W
R083	1-216-089-91	RES,CHIP	47K	5%	1/10W
R084	1-216-025-91	RES,CHIP	100	5%	1/10W
R085	1-216-049-91	RES,CHIP	1K	5%	1/10W
R086	1-216-049-91	RES,CHIP	1K	5%	1/10W
R087	1-216-049-91	RES,CHIP	1K	5%	1/10W
R088	1-216-049-91	RES,CHIP	1K	5%	1/10W
R089	1-216-049-91	RES,CHIP	1K	5%	1/10W
R090	1-216-081-00	METAL CHIP	22K	5%	1/10W
R091	1-216-081-00	METAL CHIP	22K	5%	1/10W
R092	1-216-089-91	RES,CHIP	47K	5%	1/10W
R093	1-216-049-91	RES,CHIP	1K	5%	1/10W
R094	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R095	1-216-645-11	METAL CHIP	560	0.5%	1/10W
R096	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R097	1-216-073-00	METAL CHIP	10K	5%	1/10W
R098	1-216-121-91	RES,CHIP	1M	5%	1/10W
R099	1-216-105-91	RES,CHIP	220K	5%	1/10W
R102	1-216-089-91	RES,CHIP	47K	5%	1/10W
R103	1-216-089-91	RES,CHIP	47K	5%	1/10W
R104	1-216-295-91	SHORT	0		
R107	1-216-089-91	RES,CHIP	47K	5%	1/10W
R108	1-216-295-91	SHORT	0		
R109	1-216-081-00	METAL CHIP	22K	5%	1/10W
R110	1-216-073-00	METAL CHIP	10K	5%	1/10W
R111	1-216-049-91	RES,CHIP	1K	5%	1/10W
R112	1-216-081-00	METAL CHIP	22K	5%	1/10W
R113	1-216-049-91	RES,CHIP	1K	5%	1/10W
R114	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R115	1-216-043-91	RES,CHIP	560	5%	1/10W
R116	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R117	1-216-043-91	RES,CHIP	560	5%	1/10W
R118	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R119	1-216-073-00	METAL CHIP	10K	5%	1/10W
R120	1-216-073-00	METAL CHIP	10K	5%	1/10W
R121	1-219-107-91	RES,CHIP	1.5	5%	1/8W
R122	1-219-107-91	RES,CHIP	1.5	5%	1/8W
R125	1-219-107-91	RES,CHIP	1.5	5%	1/8W
R126	1-216-049-91	RES,CHIP	1K	5%	1/10W
R127	1-216-049-91	RES,CHIP	1K	5%	1/10W
R128	1-216-049-91	RES,CHIP	1K	5%	1/10W
R129	1-216-049-91	RES,CHIP	1K	5%	1/10W
R130	1-216-025-91	RES,CHIP	100	5%	1/10W
R131	1-216-025-91	RES,CHIP	100	5%	1/10W
R132	1-216-025-91	RES,CHIP	100	5%	1/10W
R133	1-216-075-00	METAL CHIP	12K	5%	1/10W
R134	1-216-072-00	METAL CHIP	9.1K	5%	1/10W
R136	1-216-049-91	RES,CHIP	1K	5%	1/10W
R137	1-216-049-91	RES,CHIP	1K	5%	1/10W
R138	1-216-049-91	RES,CHIP	1K	5%	1/10W
R143	1-216-073-00	METAL CHIP	10K	5%	1/10W
R146	1-216-295-91	SHORT	0		
R148	1-216-017-91	RES,CHIP	47	5%	1/10W
R153	1-216-295-91	SHORT	0		
R154	1-216-295-91	SHORT	0		
R155	1-216-295-91	SHORT	0		
R158	1-216-121-91	RES,CHIP	1M	5%	1/10W
R161	1-216-295-91	SHORT	0		
R164	1-216-672-11	METAL CHIP	7.5K	0.5%	1/10W
R165	1-216-017-91	RES,CHIP	47	5%	1/10W
R167	1-216-017-91	RES,CHIP	47	5%	1/10W
R168	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R169	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R171	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R176	1-216-033-00	METAL CHIP	220	5%	1/10W
R182	1-216-121-91	RES,CHIP	1M	5%	1/10W
R193	1-216-079-00	METAL CHIP	18K	5%	1/10W
R194	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R195	1-216-079-00	METAL CHIP	18K	5%	1/10W
R196	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R201	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-121-91	RES,CHIP	1M	5%	1/10W
R206	1-216-073-00	METAL CHIP	10K	5%	1/10W
R207	1-216-073-00	METAL CHIP	10K	5%	1/10W
R208	1-216-045-00	METAL CHIP	680	5%	1/10W
R209	1-216-045-00	METAL CHIP	680	5%	1/10W
R211	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R212	1-216-645-11	METAL CHIP	560	0.5%	1/10W
R213	1-216-651-11	METAL CHIP	1K	0.5%	1/10W
R214	1-216-073-00	METAL CHIP	10K	5%	1/10W
R215	1-216-105-91	RES,CHIP	220K	5%	1/10W
R216	1-216-081-00	METAL CHIP	22K	5%	1/10W
R217	1-216-073-00	METAL CHIP	10K	5%	1/10W
R218	1-216-081-00	METAL CHIP	22K	5%	1/10W
R220	1-216-043-91	RES,CHIP	560	5%	1/10W
R221	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R225	1-216-295-91	SHORT	0		
R227	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R228	1-216-043-91	RES,CHIP	560	5%	1/10W
R229	1-216-048-00	METAL CHIP	910	5%	1/10W
R230	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R231	1-216-048-00	METAL CHIP	910	5%	1/10W
R232	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R233	1-216-089-91	RES,CHIP	47K	5%	1/10W
R234	1-216-075-00	METAL CHIP	12K	5%	1/10W
R235	1-216-072-00	METAL CHIP	9.1K	5%	1/10W
R241	1-216-073-00	METAL CHIP	10K	5%	1/10W
R244	1-216-077-00	METAL CHIP	15K	5%	1/10W
R245	1-217-671-11	METAL CHIP	1	5%	1/10W
R247	1-216-073-00	METAL CHIP	10K	5%	1/10W
R248	1-217-671-11	METAL CHIP	1	5%	1/10W
R249	1-217-671-11	METAL CHIP	1	5%	1/10W
R250	1-217-671-11	METAL CHIP	1	5%	1/10W
R253	1-216-073-00	METAL CHIP	10K	5%	1/10W
R256	1-216-075-00	METAL CHIP	12K	5%	1/10W
R257	1-216-079-00	METAL CHIP	18K	5%	1/10W
R259	1-216-295-91	SHORT	0		
R262	1-216-093-91	RES,CHIP	68K	5%	1/10W
R268	1-216-097-91	RES,CHIP	100K	5%	1/10W
R270	1-216-073-00	METAL CHIP	10K	5%	1/10W
R271	1-216-073-00	METAL CHIP	10K	5%	1/10W
R274	1-216-073-00	METAL CHIP	10K	5%	1/10W
R275	1-216-099-00	METAL CHIP	120K	5%	1/10W
R283	1-216-089-91	RES,CHIP	47K	5%	1/10W
R284	1-216-025-91	RES,CHIP	100	5%	1/10W
R285	1-216-025-91	RES,CHIP	100	5%	1/10W
R286	1-216-049-91	RES,CHIP	1K	5%	1/10W
R290	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R506	1-216-049-91	RES,CHIP	1K	5%	1/10W
R516	1-216-295-91	SHORT	0		
R517	1-216-665-11	METAL CHIP	3.9K	0.5%	1/10W
R518	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W
R519	1-216-089-91	RES,CHIP	47K	5%	1/10W
R520	1-216-089-91	RES,CHIP	47K	5%	1/10W
R521	1-216-089-91	RES,CHIP	47K	5%	1/10W
R524	1-216-089-91	RES,CHIP	47K	5%	1/10W
R525	1-216-025-91	RES,CHIP	100	5%	1/10W
R526	1-216-025-91	RES,CHIP	100	5%	1/10W
R528	1-216-295-91	SHORT	0		
R529	1-219-107-91	RES,CHIP	1.5	5%	1/8W
R530	1-219-107-91	RES,CHIP	1.5	5%	1/8W
R531	1-219-107-91	RES,CHIP	1.5	5%	1/8W
R535	1-216-089-91	RES,CHIP	47K	5%	1/10W
R536	1-216-295-91	SHORT	0		
R537	1-216-295-91	SHORT	0		
R538	1-216-295-91	SHORT	0		
R541	1-216-073-00	METAL CHIP	10K	5%	1/10W
R542	1-216-073-00	METAL CHIP	10K	5%	1/10W
R543	1-216-025-91	RES,CHIP	100	5%	1/10W
R545	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R546	1-216-073-00	METAL CHIP	10K	5%	1/10W
R547	1-216-025-91	RES,CHIP	100	5%	1/10W
R549	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R550	1-216-073-00	METAL CHIP	10K	5%	1/10W
R551	1-216-089-91	RES,CHIP	47K	5%	1/10W
R552	1-216-089-91	RES,CHIP	47K	5%	1/10W
R553	1-216-073-00	METAL CHIP	10K	5%	1/10W
R554	1-216-073-00	METAL CHIP	10K	5%	1/10W
R555	1-216-073-00	METAL CHIP	10K	5%	1/10W
R556	1-216-025-91	RES,CHIP	100	5%	1/10W
R560	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R561	1-216-049-91	RES,CHIP	1K	5%	1/10W
R562	1-216-049-91	RES,CHIP	1K	5%	1/10W
R563	1-216-049-91	RES,CHIP	1K	5%	1/10W
R564	1-216-049-91	RES,CHIP	1K	5%	1/10W
R565	1-216-049-91	RES,CHIP	1K	5%	1/10W
R566	1-216-049-91	RES,CHIP	1K	5%	1/10W
R567	1-216-017-91	RES,CHIP	47	5%	1/10W
R568	1-216-017-91	RES,CHIP	47	5%	1/10W
R569	1-216-017-91	RES,CHIP	47	5%	1/10W
R570	1-216-017-91	RES,CHIP	47	5%	1/10W
R572	1-216-295-91	SHORT	0		
R573	1-216-049-91	RES,CHIP	1K	5%	1/10W
R574	1-216-049-91	RES,CHIP	1K	5%	1/10W
R575	1-216-049-91	RES,CHIP	1K	5%	1/10W
R901	1-216-295-91	SHORT	0 (DSR-40)		
R902	1-216-295-91	SHORT	0 (DSR-40P)		

< VIBRATOR >

X001	1-760-655-21	VIBRATOR, CRYSTAL (20MHz)

FP-406 BOARD, COMPLETE
****
(Ref No. 8,000 Series)

	1-658-990-11	FP-406 FLEXIBLE BOARD
	3-318-201-11	SCREW (B) (1.4X3), TAPPING
	3-967-690-01	HOLDER, MIC
	3-970-665-01	CLEANER, MIC

< CONNECTOR >

CN901	1-770-312-21	CONNECTOR 4P

< SWITCH >

S901	1-762-551-11	SWITCH, PUSH (REC PROOF)
S902	1-572-288-11	SWITCH, PUSH (C IN)

FR-158

Ref. No.	Part No.	Description			Remark
*	A-7073-774-A	FR-158 BOARD, COMPLETE			
		**********			
					(Ref.No. 3,000 Series)
*	3-987-166-01	HOLDER, INDICATION TUBE			
		< BUZZER >			
BZ101	1-529-104-11	BUZZER, PIEZOELECTRIC			
		< CAPACITOR >			
C109	1-113-682-11	TANTAL. CHIP	33uF	20%	10V
C110	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C111	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C112	1-113-682-11	TANTAL. CHIP	33uF	20%	10V
C115	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C117	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C118	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
		< CONNECTOR >			
CN104	1-774-770-11	CONNECTOR, FFC/FPC 30P			
		< DIODE >			
D101	8-719-104-34	DIODE MA151WA-TX			
D102	8-719-106-08	DIODE RD6.2M-T1B2			
D108	8-719-061-58	DIODE CL-200Y-C-TU (DUP)			
D109	8-719-989-53	DIODE CL-200HR-C-TUL (REC)			
D110	8-719-061-58	DIODE CL-200Y-C-TU (PAUSE)			
D111	8-719-061-58	DIODE CL-200Y-C-TU (FF)			
D112	8-719-066-82	DIODE CL-200YG-C-TU (PLAY)			
D113	8-719-027-84	DIODE CL-155UR/G-DT (ON/STANDBY)			
D114	8-719-106-08	DIODE RD6.2M-T1B2			
D115	8-719-106-08	DIODE RD6.2M-T1B2			
D116	8-719-106-08	DIODE RD6.2M-T1B2			
D117	8-719-061-58	DIODE CL-200Y-C-TU (REW)			
		< FERRITE BEAD >			
FB101	1-414-445-11	FERRITE	0UH		
FB102	1-414-445-11	FERRITE	0UH		
FB103	1-414-445-11	FERRITE	0UH		
FB104	1-414-445-11	FERRITE	0UH		
FB105	1-414-445-11	FERRITE	0UH		
FB106	1-414-445-11	FERRITE	0UH		
FB107	1-414-445-11	FERRITE	0UH		
FB108	1-414-445-11	FERRITE	0UH		
FB109	1-414-445-11	FERRITE	0UH		
FB110	1-414-445-11	FERRITE	0UH		
FB111	1-414-445-11	FERRITE	0UH		
FB112	1-414-229-11	INDUCTOR CHIP	0UH		
FB113	1-414-229-11	INDUCTOR CHIP	0UH		
FB114	1-414-229-11	INDUCTOR CHIP	0UH		
FB115	1-414-229-11	INDUCTOR CHIP	0UH		
FB116	1-414-229-11	INDUCTOR CHIP	0UH		
FB117	1-414-229-11	INDUCTOR CHIP	0UH		
		< IC >			
IC103	8-759-056-81	IC M66312FP-T1			
IC104	8-759-438-82	IC uPD16311GC-AB6			

Ref. No.	Part No.	Description			Remark
		< FLUORECENT INDICATOR >			
ND101	1-517-769-11	TUBE, FLUORESCENT INDICATOR			
		< TRANSISTOR >			
Q101	8-729-424-18	TRANSISTOR UN2113-TX			
Q103	8-729-421-19	TRANSISTOR UN2213-TX			
Q104	8-729-421-19	TRANSISTOR UN2213-TX			
Q105	8-729-421-19	TRANSISTOR UN2213-TX			
Q106	8-729-421-19	TRANSISTOR UN2213-TX			
Q107	8-729-421-19	TRANSISTOR UN2213-TX			
Q110	8-729-421-19	TRANSISTOR UN2213-TX			
		< RESISTOR >			
R103	1-216-842-11	METAL CHIP	56K	5%	1/16W
R104	1-216-813-11	METAL CHIP	220	5%	1/16W
R105	1-216-811-11	METAL CHIP	150	5%	1/16W
R106	1-216-841-11	METAL CHIP	47K	5%	1/16W
R107	1-216-841-11	METAL CHIP	47K	5%	1/16W
R108	1-216-841-11	METAL CHIP	47K	5%	1/16W
R109	1-216-841-11	METAL CHIP	47K	5%	1/16W
R110	1-216-841-11	METAL CHIP	47K	5%	1/16W
R111	1-216-841-11	METAL CHIP	47K	5%	1/16W
R112	1-216-841-11	METAL CHIP	47K	5%	1/16W
R113	1-216-841-11	METAL CHIP	47K	5%	1/16W
R114	1-216-837-11	METAL CHIP	22K	5%	1/16W
R115	1-216-837-11	METAL CHIP	22K	5%	1/16W
R119	1-216-797-11	METAL CHIP	10	5%	1/16W
R120	1-216-797-11	METAL CHIP	10	5%	1/16W
R121	1-216-797-11	METAL CHIP	10	5%	1/16W
R122	1-216-797-11	METAL CHIP	10	5%	1/16W
R123	1-216-864-11	METAL CHIP	0	5%	1/16W
R124	1-216-864-11	METAL CHIP	0	5%	1/16W
R125	1-216-833-11	METAL CHIP	10K	5%	1/16W
R126	1-216-833-11	METAL CHIP	10K	5%	1/16W
R129	1-216-837-11	METAL CHIP	22K	5%	1/16W
R130	1-216-833-11	METAL CHIP	10K	5%	1/16W
R131	1-216-833-11	METAL CHIP	10K	5%	1/16W
R138	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R139	1-216-837-11	METAL CHIP	22K	5%	1/16W
R140	1-216-833-11	METAL CHIP	10K	5%	1/16W
R141	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R142	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R143	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R145	1-216-797-11	METAL CHIP	10	5%	1/16W
R146	1-216-797-11	METAL CHIP	10	5%	1/16W
R147	1-216-797-11	METAL CHIP	10	5%	1/16W
R148	1-216-797-11	METAL CHIP	10	5%	1/16W
R149	1-216-821-11	METAL CHIP	1K	5%	1/16W
R151	1-216-813-11	METAL CHIP	220	5%	1/16W
R152	1-216-814-11	METAL CHIP	270	5%	1/16W
R153	1-216-813-11	METAL CHIP	220	5%	1/16W
R154	1-216-813-11	METAL CHIP	220	5%	1/16W
R155	1-216-811-11	METAL CHIP	150	5%	1/16W
R156	1-216-813-11	METAL CHIP	220	5%	1/16W
		< SWITCH >			
S101	1-762-333-21	SWITCH, TACTILE (CL)			
S102	1-572-272-11	SWITCH, SLIDE (LOCAL/REMOTE)			
S104	1-572-272-11	SWITCH, SLIDE (TIMER)			

Ref. No.	Part No.	Description	Remark
S105	1-572-342-11	SWITCH, SLIDE (AUDIO MONITOR)	
S106	1-762-333-21	SWITCH, TACTILE (INPUT SELECT)	
S107	1-572-342-11	SWITCH, SLIDE (COUNTER SELECT)	
S108	1-692-682-11	SWITCH, TACTILE (RUBBER) (EJECT)	
S109	1-692-682-11	SWITCH, TACTILE (RUBBER) (COUNTER RESET)	
S111	1-692-682-11	SWITCH, TACTILE (RUBBER) (STOP)	
S112	1-692-682-11	SWITCH, TACTILE (RUBBER) (REW)	
S113	1-692-682-11	SWITCH, TACTILE (RUBBER) (PLAY)	
S114	1-692-682-11	SWITCH, TACTILE (RUBBER) (FF)	
S115	1-692-682-11	SWITCH, TACTILE (RUBBER) (PAUSE)	
S116	1-692-682-11	SWITCH, TACTILE (RUBBER) (REC)	
S117	1-762-333-21	SWITCH, TACTILE (DOWN)	
S118	1-762-333-21	SWITCH, TACTILE (UP)	
S119	1-762-333-21	SWITCH, TACTILE (SET)	
S120	1-762-333-21	SWITCH, TACTILE (MENU)	
S121	1-692-682-11	SWITCH, TACTILE (RUBBER) (ON/STANDBY)	
S122	1-692-682-11	SWITCH, TACTILE (RUBBER) (DUP)	

* A-7067-205-A GL-10 BOARD, COMPLETE (DSR-40)
* A-7067-207-A GL-10 BOARD, COMPLETE (DSR-40P)
****
(Ref.No. 20,000 Series)

< CAPACITOR >

C1101	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1102	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C1103	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1104	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1105	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C1106	1-135-210-11	TANTALUM CHIP	4.7uF	20%	10V
C1107	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1108	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C1109	1-126-204-11	ELECT CHIP	47uF	20%	16V
C1110	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1111	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C1112	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1113	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C1114	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C1115	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1116	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C1117	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1118	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C1119	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C1120	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C1121	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1122	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1123	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1124	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C1125	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (DSR-40)
C1127	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1129	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1130	1-115-156-11	CERAMIC CHIP	1uF		10V
C1131	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1132	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C1133	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1134	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1135	1-125-817-11	CERAMIC CHIP	10uF	10%	6.3V
C1136	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C1137	1-104-850-11	TANTAL. CHIP	6.8uF	20%	10V
C1138	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1139	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1140	1-126-204-11	ELECT CHIP	47uF	20%	16V
C1141	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1142	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C1143	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1144	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1145	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1146	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1147	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1148	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C1149	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1150	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C1151	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C1152	1-104-850-11	TANTAL. CHIP	6.8uF	20%	10V
C1153	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1154	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1155	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1156	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1157	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C1158	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C1159	1-126-204-11	ELECT CHIP	47uF	20%	16V
C1160	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1161	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1162	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1163	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C1164	1-104-850-11	TANTAL. CHIP	6.8uF	20%	10V
C1165	1-104-850-11	TANTAL. CHIP	6.8uF	20%	10V
C1166	1-126-396-11	ELECT CHIP	47uF	20%	16V
C1167	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1168	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1169	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C1170	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1171	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C1172	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1173	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C1174	1-126-392-11	ELECT CHIP	100uF	20%	6.3V
C1175	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1176	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1177	1-104-850-11	TANTAL. CHIP	6.8uF	20%	10V
C1178	1-126-396-11	ELECT CHIP	47uF	20%	16V
C1179	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C1180	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C1181	1-126-204-11	ELECT CHIP	47uF	20%	16V
C1182	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C1183	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C1184	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C1185	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1186	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V

< CONNECTOR >

CN1001	1-774-666-11	CONNECTOR, FFC/FPC 30P

< DIODE >

D1101	8-719-073-01	DIODE MA111-(K8).SO
D1102	8-719-073-01	DIODE MA111-(K8).SO
D1103	8-719-073-01	DIODE MA111-(K8).SO

< FERRITE BEAD >

FB1101	1-414-445-11	FERRITE	0UH

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Ref. No.	Part No.	Description	Remark
FB1102	1-414-445-11	FERRITE 0UH	
FB1103	1-414-445-11	FERRITE 0UH	
FB1104	1-414-445-11	FERRITE 0UH	
FB1105	1-414-445-11	FERRITE 0UH	
FB1106	1-414-445-11	FERRITE 0UH	
FB1107	1-414-445-11	FERRITE 0UH	
FB1108	1-414-445-11	FERRITE 0UH	
		< IC >	
IC1101	8-759-987-27	IC LM1881MX	
IC1102	8-759-523-78	IC TC74VHC00FT(EL)	
IC1103	8-759-523-79	IC TC74VHC02FT(EL)	
IC1104	8-759-523-97	IC TC74VHC123AFT(EL)	
IC1105	8-759-523-97	IC TC74VHC123AFT(EL) (DSR-40)	
IC1106	8-759-035-90	IC TC7S02F(TE85R)	
IC1107	8-759-524-48	IC TC74VHC393FT(EL)	
IC1108	8-759-524-19	IC TC74VHC164FT(EL)	
IC1109	8-752-335-47	IC CXD1216M-T6	
IC1111	8-759-523-78	IC TC74VHC00FT(EL)	
IC1112	8-759-524-19	IC TC74VHC164FT(EL) (DSR-40)	
IC1113	8-759-523-02	IC TC74HC4053AFT(EL)	
IC1115	8-759-524-48	IC TC74VHC393FT(EL)	
IC1116	8-759-523-97	IC TC74VHC123AFT(EL)	
IC1117	8-759-524-19	IC TC74VHC164FT(EL)	
IC1118	8-759-510-71	IC uPC358G2-E2	
IC1119	8-759-510-71	IC uPC358G2-E2	
IC1120	8-759-523-78	IC TC74VHC00FT(EL)	
IC1121	8-759-524-27	IC TC74VHC244FT(EL)	
IC1122	8-759-524-18	IC TC74VHC163FT(EL)	
IC1123	8-759-524-19	IC TC74VHC164FT(EL)	
IC1124	8-752-341-58	IC CXD1217Q-T4	
IC1125	8-759-524-18	IC TC74VHC163FT(EL)	
IC1126	8-759-491-46	IC TC74VHC04FT(EL)	
IC1127	8-759-523-95	IC TC74VHC74FT(EL)	
IC1128	8-759-523-97	IC TC74VHC123AFT(EL)	
IC1129	8-759-524-19	IC TC74VHC164FT(EL)	
IC1130	8-759-031-84	IC TC7S04F(TE85R)	
IC1131	8-759-524-19	IC TC74VHC164FT(EL)	
IC1132	8-759-510-71	IC uPC358G2-E2	
IC1133	8-759-523-97	IC TC74VHC123AFT(EL)	
IC1134	8-759-524-19	IC TC74VHC164FT(EL)	
IC1135	8-759-195-81	IC TC7S86FU(TE85R)	
IC1136	8-759-182-88	IC PQ09TZ5U	
IC1137	8-759-510-71	IC uPC358G2-E2	
IC1138	8-759-523-96	IC TC74VHC86FT(EL)	
IC1139	8-759-234-20	IC TC7S08F(TE85R)	
IC1140	8-759-157-22	IC PQ05TZ1U	
IC1141	8-752-341-58	IC CXD1217Q-T4	
IC1142	8-759-524-48	IC TC74VHC393FT(EL)	
IC1143	8-759-524-19	IC TC74VHC164FT(EL) (DSR-40)	
IC1144	8-759-524-19	IC TC74VHC164FT(EL)	
		< COIL >	
L1101	1-412-029-11	INDUCTOR CHIP 10uH	
L1102	1-412-029-11	INDUCTOR CHIP 10uH	
L1103	1-412-029-11	INDUCTOR CHIP 10uH	
L1104	1-412-029-11	INDUCTOR CHIP 10uH	
L1105	1-412-029-11	INDUCTOR CHIP 10uH	

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q1101	8-729-427-83	TRANSISTOR XP6501-TXE	
Q1102	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q1103	8-729-141-53	TRANSISTOR 2SK94-T1X2X3X4	
Q1104	8-729-026-53	TRANSISTOR 2SA1576A-T106-QR	
Q1105	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q1106	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
		< RESISTOR >	
R1101	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R1102	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R1103	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R1104	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R1105	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R1106	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R1107	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R1108	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R1109	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R1110	1-216-851-11	METAL CHIP 330K 5% 1/16W	
R1111	1-216-849-11	METAL CHIP 220K 5% 1/16W	
R1112	1-218-893-11	RES,CHIP 82K 0.50% 1/16W	
R1113	1-218-895-11	RES,CHIP 100K 0.50% 1/16W	
R1114	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R1115	1-216-864-11	METAL CHIP 0 5% 1/16W (DSR-40)	
R1116	1-216-864-11	METAL CHIP 0 5% 1/16W (DSR-40P)	
R1117	1-218-895-11	RES,CHIP 100K 0.50% 1/16W	
R1118	1-216-864-11	METAL CHIP 0 5% 1/16W (DSR-40)	
R1119	1-216-864-11	METAL CHIP 0 5% 1/16W (DSR-40P)	
R1120	1-218-871-11	RES,CHIP 10K 0.50% 1/16W	
R1121	1-216-837-11	METAL CHIP 22K 5% 1/16W (DSR-40)	
R1121	1-216-843-11	METAL CHIP 68K 5% 1/16W (DSR-40P)	
R1122	1-216-864-11	METAL CHIP 0 5% 1/16W (DSR-40P)	
R1123	1-216-864-11	METAL CHIP 0 5% 1/16W (DSR-40)	
R1124	1-216-864-11	METAL CHIP 0 5% 1/16W (DSR-40P)	
R1125	1-216-864-11	METAL CHIP 0 5% 1/16W (DSR-40P)	
R1126	1-216-864-11	METAL CHIP 0 5% 1/16W (DSR-40)	
R1127	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R1128	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1129	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1130	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R1131	1-216-829-11	METAL CHIP 4.7K 5% 1/16W	
R1132	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R1133	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1134	1-216-827-11	METAL CHIP 3.3K 5% 1/16W	
R1135	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R1136	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R1137	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R1138	1-216-831-11	METAL CHIP 6.8K 5% 1/16W	
R1139	1-218-854-11	RES,CHIP 2K 0.50% 1/16W	

Ref. No.	Part No.	Description			Remark
R1140	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1141	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1142	1-216-844-11	METAL CHIP	82K	5%	1/16W
R1143	1-216-809-11	METAL CHIP	100	5%	1/16W
R1145	1-216-843-11	METAL CHIP	68K	5%	1/16W
R1146	1-216-821-11	METAL CHIP	1K	5%	1/16W
R1147	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
R1148	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
R1149	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R1150	1-218-854-11	RES,CHIP	2K	0.50%	1/16W
R1151	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1152	1-216-839-11	METAL CHIP	33K	5%	1/16W
R1153	1-216-809-11	METAL CHIP	100	5%	1/16W
R1154	1-216-837-11	METAL CHIP	22K	5%	1/16W
R1155	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1156	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R1157	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
R1158	1-216-809-11	METAL CHIP	100	5%	1/16W
R1159	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1160	1-218-881-11	RES,CHIP	27K	0.50%	1/16W
R1161	1-218-881-11	RES,CHIP	27K	0.50%	1/16W
R1162	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R1163	1-218-854-11	RES,CHIP	2K	0.50%	1/16W
R1164	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1165	1-216-839-11	METAL CHIP	33K	5%	1/16W
R1166	1-216-809-11	METAL CHIP	100	5%	1/16W
R1167	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1168	1-216-837-11	METAL CHIP	22K	5%	1/16W
R1170	1-216-864-11	METAL CHIP	0	5%	1/16W
R1171	1-216-864-11	METAL CHIP	0	5%	1/16W
R1173	1-216-809-11	METAL CHIP	100	5%	1/16W
R1174	1-216-833-11	METAL CHIP	10K	5%	1/16W
R1175	1-218-851-11	RES,CHIP	1.5K	0.50%	1/16W
R1176	1-218-881-11	RES,CHIP	27K	0.50%	1/16W
R1177	1-218-881-11	RES,CHIP	27K	0.50%	1/16W
R1178	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R1179	1-216-818-11	METAL CHIP	560	5%	1/16W (DSR-40)
R1179	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (DSR-40P)
R1180	1-216-864-11	METAL CHIP	0	5%	1/16W
R1182	1-218-854-11	RES,CHIP	2K	0.50%	1/16W
R1183	1-218-823-11	RES,CHIP	100	0.50%	1/16W
R1184	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1185	1-218-851-11	RES,CHIP	1.5K	0.50%	1/16W
R1186	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1187	1-218-823-11	RES,CHIP	100	0.50%	1/16W
R1188	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R1189	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R1190	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
R1191	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
R1192	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R1193	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R1194	1-216-837-11	METAL CHIP	22K	5%	1/16W (DSR-40)
R1195	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R1196	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R1197	1-216-843-11	METAL CHIP	68K	5%	1/16W
R1198	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
R1199	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R1200	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
R1201	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R1202	1-216-819-11	METAL CHIP	680	5%	1/16W (DSR-40)
R1203	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)

< VIBRATOR >

X1101	1-760-267-11	OSCILLATOR, CRYSTAL (VCO TYPE) (14.31818MHz) (DSR-40)	
X1101	1-760-266-11	OSCILLATOR, CRYSTAL (VCO TYPE) (14.1875MHz) (DSR-40P)	
X1102	1-760-267-11	OSCILLATOR, CRYSTAL (VCO TYPE) (14.31818MHz) (DSR-40)	
X1102	1-760-268-11	OSCILLATOR, CRYSTAL (VCO TYPE) (17.734475MHz) (DSR-40P)	

*	A-7073-776-A	HP-118 BOARD, COMPLETE (DSR-40)	
*	A-7073-779-A	HP-118 BOARD, COMPLETE (DSR-40P)	
		**********	
		(Ref.No. 4,000 Series)	

< CAPACITOR >

C001	1-128-004-11	ELECT CHIP	10uF	20%	16V
C002	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C003	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C004	1-128-004-11	ELECT CHIP	10uF	20%	16V
C005	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C006	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C007	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C008	1-128-004-11	ELECT CHIP	10uF	20%	16V
C009	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C010	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C011	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C200	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C201	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C202	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C203	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C204	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C205	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C206	1-124-779-00	ELECT CHIP	10uF	20%	16V
C207	1-124-779-00	ELECT CHIP	10uF	20%	16V
C208	1-124-779-00	ELECT CHIP	10uF	20%	16V
C209	1-124-779-00	ELECT CHIP	10uF	20%	16V

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Ref. No.	Part No.	Description			Remark
C210	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C211	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C212	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C213	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C214	1-126-204-11	ELECT CHIP	47uF	20%	16V
C215	1-126-204-11	ELECT CHIP	47uF	20%	16V
C216	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C217	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C218	1-126-204-11	ELECT CHIP	47uF	20%	16V
C219	1-126-204-11	ELECT CHIP	47uF	20%	16V
C701	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C702	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C703	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C704	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C705	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C706	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C707	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C708	1-128-004-11	ELECT CHIP	10uF	20%	16V
C709	1-128-004-11	ELECT CHIP	10uF	20%	16V
C710	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C711	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C712	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C713	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C714	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C715	1-164-389-11	CERAMIC CHIP	300PF	5%	50V
C716	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C717	1-164-389-11	CERAMIC CHIP	300PF	5%	50V
C718	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C719	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C720	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C721	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C722	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C723	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C724	1-164-389-11	CERAMIC CHIP	300PF	5%	50V
C725	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C726	1-164-389-11	CERAMIC CHIP	300PF	5%	50V
C727	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C728	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C729	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C730	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C731	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C732	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C733	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C734	1-135-179-21	TANTAL. CHIP	2.2uF	20%	16V
C735	1-135-179-21	TANTAL. CHIP	2.2uF	20%	16V
C736	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C737	1-164-389-11	CERAMIC CHIP	300PF	5%	50V
C738	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C739	1-164-389-11	CERAMIC CHIP	300PF	5%	50V
C740	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C741	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C742	1-164-389-11	CERAMIC CHIP	300PF	5%	50V
C743	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C744	1-164-389-11	CERAMIC CHIP	300PF	5%	50V
C745	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C746	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C747	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C748	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C749	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C750	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref. No.	Part No.	Description			Remark
C751	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C752	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C753	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C754	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C755	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C756	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C757	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C758	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C759	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C760	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C761	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C762	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C763	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C764	1-128-004-11	ELECT CHIP	10uF	20%	16V
C765	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C766	1-128-004-11	ELECT CHIP	10uF	20%	16V
C767	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C768	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C771	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C772	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C773	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C774	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C890	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C892	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C893	1-115-581-11	TANTAL. CHIP	100uF	20%	16V
C895	1-115-581-11	TANTAL. CHIP	100uF	20%	16V
C898	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C899	1-104-823-11	TANTAL. CHIP	47uF	20%	16V
C900	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C901	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C906	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C907	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C910	1-109-994-11	CERAMIC CHIP	2.2uF	10%	10V

< CONNECTOR >

Ref. No.	Part No.	Description
CN200	1-566-536-11	CONNECTOR, FPC (ZIF) 20P
CN201	1-506-493-11	PIN, CONNECTOR 14P
* CN701	1-691-551-11	PIN, CONNECTOR (SMD) 8P

< DIODE >

Ref. No.	Part No.	Description
D001	8-719-421-59	DIODE MA3075WA-(TX)
D002	8-719-421-59	DIODE MA3075WA-(TX)
D003	8-719-421-59	DIODE MA3075WA-(TX)
D004	8-719-421-59	DIODE MA3075WA-(TX)
D005	8-719-421-59	DIODE MA3075WA-(TX)
D006	8-719-421-59	DIODE MA3075WA-(TX)
D007	8-719-421-59	DIODE MA3075WA-(TX)
D008	8-719-421-59	DIODE MA3075WA-(TX)
D009	8-719-421-59	DIODE MA3075WA-(TX)
D010	8-719-421-59	DIODE MA3075WA-(TX)
D011	8-719-421-59	DIODE MA3075WA-(TX)
D012	8-719-421-59	DIODE MA3075WA-(TX)
D203	8-719-941-86	DIODE DAN202UT106
D204	8-719-941-86	DIODE DAN202UT106
D858	8-719-073-01	DIODE MA111-(K8).S0
D859	8-719-073-01	DIODE MA111-(K8).S0
D861	8-719-400-56	DIODE MA3062H-TX
D863	8-719-059-18	DIODE RD6.2FM-T1

Ref. No.	Part No.	Description			Remark
		< FERRITE BEAD >			
FB001	1-500-241-22	FERRITE	0UH		
FB002	1-500-241-22	FERRITE	0UH		
FB003	1-500-241-22	FERRITE	0UH		
		< IC >			
IC001	8-759-369-73	IC NJM4556AM-A-TE2			
IC201	8-759-700-94	IC NJM5532M(TE2)			
IC204	8-759-700-94	IC NJM5532M(TE2)			
IC205	8-759-700-94	IC NJM5532M(TE2)			
IC701	8-759-745-64	IC NJM4560M-TE2			
IC702	8-759-523-02	IC TC74HC4053AFT(EL)			
IC703	8-759-523-02	IC TC74HC4053AFT(EL)			
IC704	8-759-745-64	IC NJM4560M-TE2			
IC705	8-759-358-47	IC NJM2115V(TE2)			
IC706	8-759-745-64	IC NJM4560M-TE2			
IC707	8-759-358-47	IC NJM2115V(TE2)			
IC708	8-759-481-66	IC DS1801E-014TE2			
IC709	8-759-358-47	IC NJM2115V(TE2)			
IC710	8-759-358-47	IC NJM2115V(TE2)			
IC711	8-759-523-02	IC TC74HC4053AFT(EL)			
IC712	8-759-745-64	IC NJM4560M-TE2			
IC713	8-759-358-47	IC NJM2115V(TE2)			
IC714	8-759-358-47	IC NJM2115V(TE2)			
IC715	8-759-745-64	IC NJM4560M-TE2			
IC716	8-759-745-64	IC NJM4560M-TE2			
IC717	8-759-358-47	IC NJM2115V(TE2)			
IC718	8-759-358-47	IC NJM2115V(TE2)			
IC862	8-759-822-95	IC L79M05T-FA-TL			
IC863	8-759-157-22	IC PQ05TZ1U			
IC864	8-759-929-26	IC TL431CPSR			
		< JACK >			
J001	1-569-809-11	JACK (SMALL TYPE) (PHONES)			
		< COIL >			
L856	1-412-028-11	INDUCTOR CHIP 4.7uH			
L857	1-412-028-11	INDUCTOR CHIP 4.7uH			
		< TRANSISTOR >			
Q201	8-729-028-70	TRANSISTOR UN2225T-(TX)			
Q202	8-729-028-70	TRANSISTOR UN2225T-(TX)			
Q701	8-729-015-76	TRANSISTOR UN5211-TX			
Q702	8-729-015-74	TRANSISTOR UN5111-TX			
Q703	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q704	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q705	8-729-402-42	TRANSISTOR UN5213-TX			
Q706	8-729-403-35	TRANSISTOR UN5113-TX			
Q707	8-729-015-76	TRANSISTOR UN5211-TX			
Q708	8-729-028-70	TRANSISTOR UN2225T-(TX)			
Q709	8-729-028-70	TRANSISTOR UN2225T-(TX)			
Q710	8-729-028-70	TRANSISTOR UN2225T-(TX)			
Q711	8-729-028-70	TRANSISTOR UN2225T-(TX)			
Q853	8-729-014-91	TRANSISTOR 2SD2185S-TX			
		< RESISTOR >			
R001	1-216-833-11	METAL CHIP	10K	5%	1/16W
R002	1-216-821-11	METAL CHIP	1K	5%	1/16W
R003	1-216-821-11	METAL CHIP	1K	5%	1/16W
R004	1-216-833-11	METAL CHIP	10K	5%	1/16W
R005	1-216-835-11	METAL CHIP	15K	5%	1/16W
R006	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R007	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R008	1-216-835-11	METAL CHIP	15K	5%	1/16W
R009	1-216-821-11	METAL CHIP	1K	5%	1/16W
R010	1-216-821-11	METAL CHIP	1K	5%	1/16W
R011	1-216-809-11	METAL CHIP	100	5%	1/16W
R012	1-216-809-11	METAL CHIP	100	5%	1/16W
R122	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R200	1-216-864-11	METAL CHIP	0	5%	1/16W
R201	1-218-833-11	RES,CHIP	270	0.50%	1/16W
R202	1-218-836-11	RES,CHIP	360	0.50%	1/16W
R203	1-218-847-11	RES,CHIP	1K	0.50%	1/16W
R204	1-218-823-11	RES,CHIP	100	0.50%	1/16W
R205	1-218-833-11	RES,CHIP	270	0.50%	1/16W
R206	1-218-836-11	RES,CHIP	360	0.50%	1/16W
R207	1-218-847-11	RES,CHIP	1K	0.50%	1/16W
R208	1-218-823-11	RES,CHIP	100	0.50%	1/16W
R209	1-216-864-11	METAL CHIP	0	5%	1/16W
R210	1-216-864-11	METAL CHIP	0	5%	1/16W
R211	1-216-864-11	METAL CHIP	0	5%	1/16W
R212	1-216-813-11	METAL CHIP	220	5%	1/16W
R213	1-216-813-11	METAL CHIP	220	5%	1/16W
R218	1-218-868-11	RES,CHIP	7.5K	0.50%	1/16W
R219	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R220	1-211-981-11	RES,CHIP	33	0.50%	1/16W
R221	1-218-868-11	RES,CHIP	7.5K	0.50%	1/16W
R222	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R223	1-211-981-11	RES,CHIP	33	0.50%	1/16W
R224	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R225	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R226	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R227	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R228	1-218-868-11	RES,CHIP	7.5K	0.50%	1/16W
R229	1-218-868-11	RES,CHIP	7.5K	0.50%	1/16W
R230	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R231	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R232	1-218-868-11	RES,CHIP	7.5K	0.50%	1/16W
R233	1-218-868-11	RES,CHIP	7.5K	0.50%	1/16W
R234	1-218-830-11	RES,CHIP	200	0.50%	1/16W
R235	1-211-981-11	RES,CHIP	33	0.50%	1/16W
R236	1-218-868-11	RES,CHIP	7.5K	0.50%	1/16W
R237	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R238	1-218-830-11	RES,CHIP	200	0.50%	1/16W
R239	1-218-868-11	RES,CHIP	7.5K	0.50%	1/16W
R240	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R241	1-211-981-11	RES,CHIP	33	0.50%	1/16W
R242	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R243	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R244	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R245	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R246	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R247	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R248	1-218-868-11	RES,CHIP	7.5K	0.50%	1/16W
R249	1-218-872-11	RES,CHIP	11K	0.50%	1/16W
R251	1-218-868-11	RES,CHIP	7.5K	0.50%	1/16W
R253	1-218-872-11	RES,CHIP	11K	0.50%	1/16W
R254	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)

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Ref. No.	Part No.	Description			Remark
R255	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R257	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
R258	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R701	1-216-833-11	METAL CHIP	10K	5%	1/16W
R702	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R703	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R704	1-216-833-11	METAL CHIP	10K	5%	1/16W
R705	1-216-833-11	METAL CHIP	10K	5%	1/16W
R706	1-216-833-11	METAL CHIP	10K	5%	1/16W
R707	1-216-833-11	METAL CHIP	10K	5%	1/16W
R708	1-216-833-11	METAL CHIP	10K	5%	1/16W
R711	1-216-864-11	METAL CHIP	0	5%	1/16W
R712	1-216-864-11	METAL CHIP	0	5%	1/16W
R713	1-218-875-11	RES,CHIP	15K	0.50%	1/16W
R714	1-218-875-11	RES,CHIP	15K	0.50%	1/16W
R715	1-216-833-11	METAL CHIP	10K	5%	1/16W
R716	1-216-833-11	METAL CHIP	10K	5%	1/16W
R717	1-218-875-11	RES,CHIP	15K	0.50%	1/16W
R718	1-218-875-11	RES,CHIP	15K	0.50%	1/16W
R719	1-216-864-11	METAL CHIP	0	5%	1/16W
R720	1-216-833-11	METAL CHIP	10K	5%	1/16W
R721	1-218-823-11	RES,CHIP	100	0.50%	1/16W
R722	1-218-887-11	RES,CHIP	47K	0.50%	1/16W
R723	1-216-837-11	METAL CHIP	22K	5%	1/16W
R724	1-216-864-11	METAL CHIP	0	5%	1/16W
R725	1-216-833-11	METAL CHIP	10K	5%	1/16W
R726	1-218-823-11	RES,CHIP	100	0.50%	1/16W
R727	1-216-845-11	METAL CHIP	100K	5%	1/16W
R728	1-216-845-11	METAL CHIP	100K	5%	1/16W
R729	1-216-845-11	METAL CHIP	100K	5%	1/16W
R730	1-216-845-11	METAL CHIP	100K	5%	1/16W
R731	1-216-837-11	METAL CHIP	22K	5%	1/16W
R732	1-216-833-11	METAL CHIP	10K	5%	1/16W
R733	1-216-833-11	METAL CHIP	10K	5%	1/16W
R734	1-218-887-11	RES,CHIP	47K	0.50%	1/16W
R735	1-216-833-11	METAL CHIP	10K	5%	1/16W
R736	1-216-833-11	METAL CHIP	10K	5%	1/16W
R737	1-216-833-11	METAL CHIP	10K	5%	1/16W
R738	1-216-833-11	METAL CHIP	10K	5%	1/16W
R739	1-216-819-11	METAL CHIP	680	5%	1/16W
R740	1-216-819-11	METAL CHIP	680	5%	1/16W
R741	1-216-833-11	METAL CHIP	10K	5%	1/16W
R742	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R743	1-216-841-11	METAL CHIP	47K	5%	1/16W
R744	1-216-833-11	METAL CHIP	10K	5%	1/16W
R745	1-216-833-11	METAL CHIP	10K	5%	1/16W
R746	1-216-841-11	METAL CHIP	47K	5%	1/16W
R747	1-216-833-11	METAL CHIP	10K	5%	1/16W
R748	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R749	1-216-833-11	METAL CHIP	10K	5%	1/16W
R750	1-216-833-11	METAL CHIP	10K	5%	1/16W
R753	1-218-332-11	RES,CHIP	130K	5%	1/16W
R754	1-218-332-11	RES,CHIP	130K	5%	1/16W
R755	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R756	1-218-293-11	RES,CHIP	24K	5%	1/16W
R757	1-218-293-11	RES,CHIP	24K	5%	1/16W
R758	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R759	1-216-841-11	METAL CHIP	47K	5%	1/16W
R760	1-218-332-11	RES,CHIP	130K	5%	1/16W
R761	1-218-332-11	RES,CHIP	130K	5%	1/16W
R762	1-216-841-11	METAL CHIP	47K	5%	1/16W
R763	1-216-833-11	METAL CHIP	10K	5%	1/16W
R764	1-216-849-11	METAL CHIP	220K	5%	1/16W
R765	1-216-833-11	METAL CHIP	10K	5%	1/16W
R766	1-218-882-11	RES,CHIP	30K	0.50%	1/16W
R767	1-218-862-11	RES,CHIP	4.3K	0.50%	1/16W
R768	1-216-833-11	METAL CHIP	10K	5%	1/16W
R769	1-216-833-11	METAL CHIP	10K	5%	1/16W
R770	1-216-833-11	METAL CHIP	10K	5%	1/16W
R771	1-216-833-11	METAL CHIP	10K	5%	1/16W
R772	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R773	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R774	1-216-833-11	METAL CHIP	10K	5%	1/16W
R775	1-218-823-11	RES,CHIP	100	0.50%	1/16W
R776	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R777	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R778	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R779	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R780	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R781	1-216-849-11	METAL CHIP	220K	5%	1/16W
R782	1-218-823-11	RES,CHIP	100	0.50%	1/16W
R783	1-218-290-11	RES,CHIP	6.2K	5%	1/16W
R784	1-218-290-11	RES,CHIP	6.2K	5%	1/16W
R785	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R786	1-218-882-11	RES,CHIP	30K	0.50%	1/16W
R787	1-218-862-11	RES,CHIP	4.3K	0.50%	1/16W
R788	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R789	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R790	1-218-823-11	RES,CHIP	100	0.50%	1/16W
R791	1-216-809-11	METAL CHIP	100	5%	1/16W
R792	1-216-840-11	METAL CHIP	39K	5%	1/16W
R793	1-218-823-11	RES,CHIP	100	0.50%	1/16W
R794	1-216-833-11	METAL CHIP	10K	5%	1/16W
R795	1-216-840-11	METAL CHIP	39K	5%	1/16W
R796	1-216-809-11	METAL CHIP	100	5%	1/16W
R797	1-216-821-11	METAL CHIP	1K	5%	1/16W
R798	1-218-847-11	RES,CHIP	1K	0.50%	1/16W
R799	1-218-847-11	RES,CHIP	1K	0.50%	1/16W
R801	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R804	1-216-840-11	METAL CHIP	39K	5%	1/16W
R805	1-216-840-11	METAL CHIP	39K	5%	1/16W
R807	1-216-864-11	METAL CHIP	0	5%	1/16W
R809	1-216-833-11	METAL CHIP	10K	5%	1/16W
R810	1-216-833-11	METAL CHIP	10K	5%	1/16W
R811	1-216-833-11	METAL CHIP	10K	5%	1/16W
R812	1-216-833-11	METAL CHIP	10K	5%	1/16W
R813	1-216-833-11	METAL CHIP	10K	5%	1/16W
R814	1-216-833-11	METAL CHIP	10K	5%	1/16W
R880	1-216-864-11	METAL CHIP	0	5%	1/16W
R948	1-216-170-00	RES,CHIP	68	5%	1/8W
R949	1-216-170-00	RES,CHIP	68	5%	1/8W
R951	1-216-037-00	METAL CHIP	330	5%	1/10W
R952	1-216-170-00	RES,CHIP	68	5%	1/8W
R953	1-216-170-00	RES,CHIP	68	5%	1/8W
R955	1-216-170-00	RES,CHIP	68	5%	1/8W
R956	1-216-170-00	RES,CHIP	68	5%	1/8W
R957	1-216-061-00	METAL CHIP	3.3K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R959	1-218-867-11	RES,CHIP	6.8K	0.50%	1/16W
R960	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
		< VARIABLE RESISTOR >			
RV001	1-238-612-11	RES, VAR, CARBON 20K/20K (PHONE LEVEL)			
RV002	1-238-744-11	RES, VAR, CARBON, 50K (INPUT LEVEL CH-1)			
RV003	1-238-744-11	RES, VAR, CARBON, 50K (INPUT LEVEL CH-2)			
RV201	1-241-481-11	RES, ADJ, CERMET 100K			
RV202	1-241-481-11	RES, ADJ, CERMET 100K			
*	A-7067-130-A	JC-19 BOARD, COMPLETE (DSR-40)			
*	A-7067-126-A	JC-19 BOARD, COMPLETE (DSR-40P)			
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					(Ref.No. 5,000 Series)
	7-685-132-19	SCREW +P 2.6X5 TYPE2 NON-SLIT			
		< CAPACITOR >			
C101	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C102	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C103	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C107	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C108	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C109	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C110	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C111	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C112	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C116	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C117	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C118	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C119	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C120	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C121	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C122	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C123	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C124	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C125	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C127	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C128	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C129	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C130	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C131	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C132	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C133	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C135	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C136	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C137	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C138	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C139	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C141	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C143	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C148	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C149	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C150	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C151	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C152	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C153	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C154	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C155	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C156	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C157	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C158	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C159	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C160	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C161	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C162	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C163	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C164	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C165	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C166	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C167	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C168	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C170	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C171	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C172	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C173	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C174	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C175	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C179	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C180	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C181	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C182	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C183	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C184	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C185	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C186	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C187	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C201	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C202	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C203	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C204	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C205	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C206	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C207	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C208	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C209	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C210	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C211	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C212	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C214	1-162-926-11	CERAMIC CHIP	82PF	5%	50V
C215	1-164-392-11	CERAMIC CHIP	390PF	5%	50V
C216	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C217	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C218	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C219	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C220	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C221	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C223	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C224	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C225	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C226	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C227	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C229	1-104-912-11	TANTAL. CHIP	3.3uF	20%	16V
C231	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C233	1-162-907-11	CERAMIC CHIP	2PF	0.25PF	50V
C234	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C238	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C241	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C243	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C245	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C246	1-162-974-11	CERAMIC CHIP	0.01uF		50V

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Ref. No.	Part No.	Description			Remark
C247	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C248	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C249	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C250	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C252	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C253	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C254	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C255	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C256	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C257	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C258	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C259	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C260	1-104-912-11	TANTAL. CHIP	3.3uF	20%	16V
C261	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C262	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C401	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C402	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C403	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C404	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C405	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C406	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C407	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C408	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C410	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C412	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C413	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C421	1-111-253-11	TANTAL. CHIP	100uF	20%	6.3V
C422	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C423	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C424	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C425	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C426	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C427	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C428	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C429	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C430	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C431	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C432	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C433	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C434	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C435	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C436	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C437	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C438	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C439	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C440	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C441	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C442	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C501	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C502	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C503	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C504	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C505	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C506	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C511	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C512	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C513	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C514	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C515	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C516	1-104-847-11	TANTAL. CHIP	22uF	20%	4V

Ref. No.	Part No.	Description			Remark
C517	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C518	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C519	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C520	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C521	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C522	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C523	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C524	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C701	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C702	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C703	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C704	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C705	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C706	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C707	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C708	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C709	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C710	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C711	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C712	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C713	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C714	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C715	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C801	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C802	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C803	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C804	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C807	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C809	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C810	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C811	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C812	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C813	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C814	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C815	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C816	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C831	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C832	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C833	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C834	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C835	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C837	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C838	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C839	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C840	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C843	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C844	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C845	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C846	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C847	1-164-676-11	CERAMIC CHIP	2200PF	5%	16V
C848	1-164-676-11	CERAMIC CHIP	2200PF	5%	16V
C849	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C850	1-164-392-11	CERAMIC CHIP	390PF	5%	50V
C851	1-164-392-11	CERAMIC CHIP	390PF	5%	50V
C852	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C853	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C854	1-135-149-21	TANTALUM CHIP	2.2uF	20%	10V
C855	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C856	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C857	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref. No.	Part No.	Description			Remark
C859	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C860	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C861	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C862	1-135-151-21	TANTALUM CHIP	4.7uF	20%	4V
C863	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C864	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C865	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C901	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C902	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C903	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C904	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C905	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C906	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C907	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C908	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C909	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C910	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C911	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C912	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C914	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C915	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C916	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C917	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C919	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C920	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C921	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C922	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C924	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C926	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C927	1-162-908-11	CERAMIC CHIP	3PF	0.25PF	50V
C929	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C930	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C931	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C932	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C933	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C934	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C935	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C936	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C937	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C940	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C941	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C942	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN101	1-506-474-11	PIN, CONNECTOR 9P			
CN103	1-774-666-11	CONNECTOR, FFC/FPC 30P			
CN104	1-774-666-11	CONNECTOR, FFC/FPC 30P			
CN411	1-750-345-11	CONNECTOR, FFC/EPC (ZIF) 30P			
CN412	1-750-345-11	CONNECTOR, FFC/EPC (ZIF) 30P			
* CN501	1-691-591-11	PIN, CONNECTOR (1.5MM) (SMD)8P			
CN503	1-750-303-41	CONNECTOR, BOARD TO BOARD 20P			
* CN701	1-564-005-11	PIN, CONNECTOR 6P			
* CN831	1-691-591-11	PIN, CONNECTOR (1.5MM) (SMD)8P			
		< TRIMMER >			
CT201	1-141-423-61	CAP, ADJ 20PF (AFC)			
		< DIODE >			
D201	8-719-041-39	DIODE KV1470TL00			
D421	8-719-027-95	DIODE HSM88WK-TL			
D422	8-719-055-86	DIODE KV1470TL1-3			
D423	8-719-027-95	DIODE HSM88WK-TL			
D424	8-719-055-86	DIODE KV1470TL1-3			
D425	8-719-055-86	DIODE KV1470TL1-3			
D501	8-719-404-50	DIODE MA111-TX			
D503	8-719-421-27	DIODE MA728-TX			
D504	8-719-404-50	DIODE MA111-TX			
D901	8-719-404-50	DIODE MA111-TX			
D902	8-719-055-86	DIODE KV1470TL1-3			
D903	8-719-404-50	DIODE MA111-TX			
D910	8-719-404-50	DIODE MA111-TX			
		< FERRITE BEAD >			
FB401	1-543-955-22	FERRITE	0UH		
FB402	1-543-955-22	FERRITE	0UH		
		< FILTER >			
FL101	1-233-345-21	FILTER, LOW PASS (5.5MHz)			
FL102	1-233-345-21	FILTER, LOW PASS (5.5MHz)			
FL103	1-233-345-21	FILTER, LOW PASS (5.5MHz)			
		< IC >			
IC009	8-759-338-78	IC BA10324AFV-E2			
IC010	8-759-338-78	IC BA10324AFV-E2			
IC011	8-759-338-78	IC BA10324AFV-E2			
IC012	8-759-338-78	IC BA10324AFV-E2			
IC013	8-759-510-71	IC BA10358F-E2			
IC014	8-759-359-51	IC NJM431M(TE2)			
IC015	8-752-352-09	IC CXD2300Q-T4			
IC016	8-752-352-09	IC CXD2300Q-T4			
IC017	8-752-352-09	IC CXD2300Q-T4			
IC018	8-759-523-03	IC TC74HC4066AFT(EL)			
IC019	8-759-447-75	IC S-81322HG-KW-T1			
IC200	8-752-380-04	IC CXD3100R			
IC205	8-759-343-09	IC CXD2193AR-ER			
IC206	8-759-058-62	IC TC7S08FU(TE85R)			
IC207	8-759-368-81	IC TK11630UTL			
IC209	8-759-523-97	IC TC74VHC123AFT(EL)			
IC210	8-759-485-79	IC TC7SET08FU(TE85R)			
IC211	8-759-239-58	IC TC74HC221AF(EL)			
IC212	8-759-082-55	IC TC7W00FU(TE12R)			
IC213	8-759-523-02	IC TC74HC4053AFT(EL)			
IC214	8-759-491-31	IC TC74VHCT00AF(EL)			
IC401	8-752-380-73	IC CXD3103R			
IC402	8-759-328-28	IC ZA4024			
IC403	8-759-328-28	IC ZA4024			
IC410	8-759-433-17	IC uPD482445LG4-B10-9MH-E2-HDC			
IC411	8-759-525-63	IC uPD82094GD-001-LKL			
IC421	8-752-884-57	IC CXP912032-074R-T6			
IC422	8-752-378-75	IC CXD3106R			
IC501	8-759-537-46	IC S579174PZ-TEB			
IC502	8-759-445-93	IC AK6440AM-E2			
IC503	8-759-058-58	IC TC7S04FU(TE85R)			
IC504	8-759-427-85	IC MB88146APFV-G-BND-ER			
IC510	8-759-431-95	IC S-81230SGUP-DQB-T1			
IC511	8-759-512-69	IC S-81350HG-KD-T1			
IC701	8-759-430-56	IC CXD2194AR			
IC702	8-759-432-00	IC TSB11LV01PT-TEB			
IC703	8-759-465-99	IC HD6433837TB55X			
IC801	8-752-352-30	IC CXD2705AQ			

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Ref. No.	Part No.	Description	Remark
IC802	8-759-530-57	IC TLV431ACDBV2	
IC804	8-759-465-80	IC TC74ACT08FS(EL)	
IC805	8-752-379-31	IC CXD3107R	
IC807	8-759-475-36	IC TC74LCX08FT(EL)	
IC831	8-759-358-47	IC NJM2115V(TE2)	
IC832	8-759-358-47	IC NJM2115V(TE2)	
IC833	8-759-358-47	IC NJM2115V(TE2)	
IC835	8-759-358-47	IC NJM2115V(TE2)	
IC836	8-759-358-47	IC NJM2115V(TE2)	
IC837	8-759-471-38	IC AK4520A-VF-E2	
IC838	8-759-357-67	IC TK15125MTL	
IC840	8-759-358-47	IC NJM2115V(TE2)	
IC841	8-759-494-88	IC TC75S56F(TE85R)	
IC901	8-759-523-97	IC TC74VHC123AFT(EL)	
IC902	8-759-523-95	IC TC74VHC74FT(EL)	
IC903	8-759-083-94	IC TC7W74FU(TE12R)	
IC904	8-759-429-28	IC CXD8630R	
IC906	8-759-523-97	IC TC74VHC123AFT(EL)	
IC907	8-759-195-81	IC TC7S86FU(TE85R)	
IC908	8-759-082-58	IC TC7W08FU(TE12R)	
IC909	8-759-523-95	IC TC74VHC74FT(EL)	
IC911	8-759-327-04	IC CXD2913Q	
IC914	8-759-485-40	IC TLV2231CDBV2	
IC915	8-759-082-61	IC TC4W53FU(TE12R)	
IC916	8-759-058-62	IC TC7S08FU(TE85R)	
		< COIL >	
L011	1-414-398-11	INDUCTOR 10uH	
L012	1-414-398-11	INDUCTOR 10uH	
L013	1-414-398-11	INDUCTOR 10uH	
L014	1-414-398-11	INDUCTOR 10uH	
L015	1-414-398-11	INDUCTOR 10uH	
L016	1-414-398-11	INDUCTOR 10uH	
L017	1-414-398-11	INDUCTOR 10uH	
L018	1-414-398-11	INDUCTOR 10uH	
L102	1-414-398-11	INDUCTOR 10uH	
L200	1-414-398-11	INDUCTOR 10uH	
L202	1-410-390-11	INDUCTOR CHIP 56uH	
L203	1-414-398-11	INDUCTOR 10uH	
L204	1-414-398-11	INDUCTOR 10uH	
L205	1-411-275-21	COIL, VARIABLE	
L206	1-410-655-31	INDUCTOR CHIP 120uH	
L401	1-414-398-11	INDUCTOR 10uH	
L402	1-414-398-11	INDUCTOR 10uH	
L421	1-410-740-31	INDUCTOR CHIP 0.82uH	
L422	1-410-378-11	INDUCTOR CHIP 5.6uH	
L423	1-414-398-11	INDUCTOR 10uH	
L424	1-410-385-11	INDUCTOR CHIP 22uH	
L501	1-414-398-11	INDUCTOR 10uH	
L701	1-410-377-31	INDUCTOR CHIP 4.7uH	
L702	1-414-398-11	INDUCTOR 10uH	
L703	1-410-393-11	INDUCTOR CHIP 100uH	
L801	1-410-369-11	INDUCTOR CHIP 1uH	
L802	1-410-381-11	INDUCTOR CHIP 10uH	
L901	1-414-398-11	INDUCTOR 10uH	
L904	1-414-398-11	INDUCTOR 10uH	
L905	1-411-273-21	COIL, VARIABLE	
L907	1-414-398-11	INDUCTOR 10uH	

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q026	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q027	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q028	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q029	8-729-202-38	TRANSISTOR 2SC3326N-TE85L-B			
Q030	8-729-202-38	TRANSISTOR 2SC3326N-TE85L-B			
Q031	8-729-202-38	TRANSISTOR 2SC3326N-TE85L-B			
Q032	8-729-026-52	TRANSISTOR 2SA1576A-T106-R			
Q033	8-729-026-52	TRANSISTOR 2SA1576A-T106-R			
Q034	8-729-026-52	TRANSISTOR 2SA1576A-T106-R			
Q035	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q036	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q037	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q039	8-729-026-52	TRANSISTOR 2SA1576A-T106-R			
Q040	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q041	8-729-026-52	TRANSISTOR 2SA1576A-T106-R			
Q042	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q043	8-729-026-52	TRANSISTOR 2SA1576A-T106-R			
Q044	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q045	8-729-026-52	TRANSISTOR 2SA1576A-T106-R			
Q048	8-729-402-42	TRANSISTOR UN5213-TX			
Q050	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q051	8-729-427-83	TRANSISTOR XP6501-TXE			
Q052	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q053	8-729-427-83	TRANSISTOR XP6501-TXE			
Q200	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q201	8-729-026-52	TRANSISTOR 2SA1576A-T106-R			
Q501	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q502	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q504	8-729-403-35	TRANSISTOR UN5113-TX			
Q505	8-729-427-70	TRANSISTOR XP4401-TXE			
Q506	8-729-101-07	TRANSISTOR 2SB798-T1-DLDK			
Q801	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q832	8-729-015-74	TRANSISTOR UN5111-TX			
Q902	8-729-905-35	TRANSISTOR 2SC4081T106R			
Q903	8-729-402-42	TRANSISTOR UN5213-TX			
Q910	8-729-015-76	TRANSISTOR UN5211-TX			
Q911	8-729-015-76	TRANSISTOR UN5211-TX			
		< RESISTOR >			
R002	1-216-864-11	METAL CHIP	0	5%	1/16W
R003	1-414-760-21	FERRITE	0UH		
R004	1-414-760-21	FERRITE	0UH		
R005	1-414-760-21	FERRITE	0UH		
R009	1-414-760-21	FERRITE	0UH		
R010	1-216-864-11	METAL CHIP	0	5%	1/16W
R012	1-216-864-11	METAL CHIP	0	5%	1/16W
R013	1-216-864-11	METAL CHIP	0	5%	1/16W
R014	1-216-864-11	METAL CHIP	0	5%	1/16W
R015	1-216-864-11	METAL CHIP	0	5%	1/16W
R016	1-216-864-11	METAL CHIP	0	5%	1/16W
R017	1-414-760-21	FERRITE	0UH		
R018	1-414-760-21	FERRITE	0UH		
R020	1-414-760-21	FERRITE	0UH		
R021	1-414-760-21	FERRITE	0UH		
R023	1-216-864-11	METAL CHIP	0	5%	1/16W
R030	1-414-760-21	FERRITE	0UH		
R033	1-216-864-11	METAL CHIP	0	5%	1/16W
R034	1-216-864-11	METAL CHIP	0	5%	1/16W
R036	1-216-864-11	METAL CHIP	0	5%	1/16W

Ref. No.	Part No.	Description			Remark
R037	1-216-864-11	METAL CHIP	0	5%	1/16W
R038	1-414-760-21	FERRITE	0UH		
R039	1-216-864-11	METAL CHIP	0	5%	1/16W
R040	1-414-760-21	FERRITE	0UH		
R041	1-414-760-21	FERRITE	0UH		
R042	1-414-760-21	FERRITE	0UH		
R043	1-216-864-11	METAL CHIP	0	5%	1/16W
R044	1-414-760-21	FERRITE	0UH		
R045	1-216-864-11	METAL CHIP	0	5%	1/16W
R046	1-216-864-11	METAL CHIP	0	5%	1/16W
R047	1-216-864-11	METAL CHIP	0	5%	1/16W
R048	1-414-760-21	FERRITE	0UH		
R049	1-414-760-21	FERRITE	0UH		
R050	1-414-760-21	FERRITE	0UH		
R052	1-414-760-21	FERRITE	0UH		
R053	1-414-760-21	FERRITE	0UH		
R054	1-414-760-21	FERRITE	0UH		
R055	1-414-760-21	FERRITE	0UH		
R056	1-414-760-21	FERRITE	0UH		
R057	1-414-760-21	FERRITE	0UH		
R059	1-216-837-11	METAL CHIP	22K	5%	1/16W
R060	1-216-818-11	METAL CHIP	560	5%	1/16W
R061	1-216-817-11	METAL CHIP	470	5%	1/16W
R062	1-216-821-11	METAL CHIP	1K	5%	1/16W
R063	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R064	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R065	1-216-837-11	METAL CHIP	22K	5%	1/16W
R067	1-216-818-11	METAL CHIP	560	5%	1/16W
R068	1-216-817-11	METAL CHIP	470	5%	1/16W
R069	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R070	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R071	1-216-821-11	METAL CHIP	1K	5%	1/16W
R113	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R115	1-216-837-11	METAL CHIP	22K	5%	1/16W
R116	1-216-837-11	METAL CHIP	22K	5%	1/16W
R117	1-216-837-11	METAL CHIP	22K	5%	1/16W
R118	1-216-821-11	METAL CHIP	1K	5%	1/16W
R119	1-216-821-11	METAL CHIP	1K	5%	1/16W
R120	1-216-821-11	METAL CHIP	1K	5%	1/16W
R121	1-216-864-11	METAL CHIP	0	5%	1/16W
R122	1-216-864-11	METAL CHIP	0	5%	1/16W
R123	1-216-864-11	METAL CHIP	0	5%	1/16W
R124	1-216-833-11	METAL CHIP	10K	5%	1/16W
R125	1-216-833-11	METAL CHIP	10K	5%	1/16W
R126	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R127	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R128	1-216-809-11	METAL CHIP	100	5%	1/16W
R129	1-216-809-11	METAL CHIP	100	5%	1/16W
R130	1-216-809-11	METAL CHIP	100	5%	1/16W
R131	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R133	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R134	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R135	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R136	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R137	1-216-833-11	METAL CHIP	10K	5%	1/16W
R138	1-216-833-11	METAL CHIP	10K	5%	1/16W
R139	1-216-821-11	METAL CHIP	1K	5%	1/16W
R140	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R141	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R142	1-216-821-11	METAL CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R143	1-216-835-11	METAL CHIP	15K	5%	1/16W
R145	1-216-821-11	METAL CHIP	1K	5%	1/16W
R146	1-216-821-11	METAL CHIP	1K	5%	1/16W
R147	1-216-821-11	METAL CHIP	1K	5%	1/16W
R148	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R149	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R150	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R151	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R152	1-216-835-11	METAL CHIP	15K	5%	1/16W
R154	1-216-809-11	METAL CHIP	100	5%	1/16W
R155	1-216-809-11	METAL CHIP	100	5%	1/16W
R156	1-216-809-11	METAL CHIP	100	5%	1/16W
R157	1-216-864-11	METAL CHIP	0	5%	1/16W
R159	1-216-805-11	METAL CHIP	47	5%	1/16W
R160	1-216-821-11	METAL CHIP	1K	5%	1/16W
R161	1-216-821-11	METAL CHIP	1K	5%	1/16W
R162	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R163	1-216-864-11	METAL CHIP	0	5%	1/16W
R164	1-216-816-11	METAL CHIP	390	5%	1/16W
R165	1-216-864-11	METAL CHIP	0	5%	1/16W
R166	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R167	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R168	1-216-835-11	METAL CHIP	15K	5%	1/16W
R169	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R170	1-216-864-11	METAL CHIP	0	5%	1/16W
R173	1-216-821-11	METAL CHIP	1K	5%	1/16W
R174	1-216-821-11	METAL CHIP	1K	5%	1/16W
R175	1-216-813-11	METAL CHIP	220	5%	1/16W
R176	1-216-821-11	METAL CHIP	1K	5%	1/16W
R177	1-216-821-11	METAL CHIP	1K	5%	1/16W
R178	1-216-817-11	METAL CHIP	470	5%	1/16W
R182	1-216-821-11	METAL CHIP	1K	5%	1/16W
R183	1-216-821-11	METAL CHIP	1K	5%	1/16W
R184	1-216-817-11	METAL CHIP	470	5%	1/16W
R185	1-216-821-11	METAL CHIP	1K	5%	1/16W
R186	1-216-821-11	METAL CHIP	1K	5%	1/16W
R187	1-216-817-11	METAL CHIP	470	5%	1/16W
R192	1-216-821-11	METAL CHIP	1K	5%	1/16W
R199	1-216-821-11	METAL CHIP	1K	5%	1/16W
R201	1-216-821-11	METAL CHIP	1K	5%	1/16W
R203	1-216-864-11	METAL CHIP	0	5%	1/16W
R204	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R205	1-216-864-11	METAL CHIP	0	5%	1/16W
R206	1-216-864-11	METAL CHIP	0	5%	1/16W
R207	1-216-864-11	METAL CHIP	0	5%	1/16W
R208	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R209	1-216-864-11	METAL CHIP	0	5%	1/16W
R210	1-216-864-11	METAL CHIP	0	5%	1/16W
R211	1-216-833-11	METAL CHIP	10K	5%	1/16W
R212	1-216-864-11	METAL CHIP	0	5%	1/16W
R213	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R214	1-216-833-11	METAL CHIP	10K	5%	1/16W
R215	1-216-840-11	METAL CHIP	39K	5%	1/16W
R216	1-216-864-11	METAL CHIP	0	5%	1/16W
R217	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R218	1-216-864-11	METAL CHIP	0	5%	1/16W
R219	1-216-864-11	METAL CHIP	0	5%	1/16W
R246	1-216-864-11	METAL CHIP	0	5%	1/16W
R247	1-216-821-11	METAL CHIP	1K	5%	1/16W
R248	1-216-817-11	METAL CHIP	470	5%	1/16W

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Ref. No.	Part No.	Description			Remark
R249	1-216-817-11	METAL CHIP	470	5%	1/16W
R250	1-216-821-11	METAL CHIP	1K	5%	1/16W
R256	1-216-833-11	METAL CHIP	10K	5%	1/16W
R259	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R260	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R261	1-216-814-11	METAL CHIP	270	5%	1/16W
R262	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R264	1-216-833-11	METAL CHIP	10K	5%	1/16W
R266	1-216-833-11	METAL CHIP	10K	5%	1/16W
R268	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R269	1-216-814-11	METAL CHIP	270	5%	1/16W
R270	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R271	1-216-864-11	METAL CHIP	0	5%	1/16W
R272	1-216-855-11	METAL CHIP	680K	5%	1/16W
R273	1-216-839-11	METAL CHIP	33K	5%	1/16W
R274	1-216-864-11	METAL CHIP	0	5%	1/16W
R276	1-216-833-11	METAL CHIP	10K	5%	1/16W
R277	1-216-839-11	METAL CHIP	33K	5%	1/16W
R278	1-216-864-11	METAL CHIP	0	5%	1/16W
R279	1-216-839-11	METAL CHIP	33K	5%	1/16W
R280	1-216-833-11	METAL CHIP	10K	5%	1/16W
R281	1-216-821-11	METAL CHIP	1K	5%	1/16W
R282	1-216-839-11	METAL CHIP	33K	5%	1/16W
R285	1-216-864-11	METAL CHIP	0	5%	1/16W
R286	1-216-833-11	METAL CHIP	10K	5%	1/16W
R288	1-216-833-11	METAL CHIP	10K	5%	1/16W
R292	1-216-833-11	METAL CHIP	10K	5%	1/16W
R295	1-216-864-11	METAL CHIP	0	5%	1/16W
R297	1-216-864-11	METAL CHIP	0	5%	1/16W
R298	1-216-864-11	METAL CHIP	0	5%	1/16W
R299	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R300	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R301	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R302	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R303	1-216-821-11	METAL CHIP	1K	5%	1/16W
R304	1-216-815-11	METAL CHIP	330	5%	1/16W
R313	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R314	1-216-815-11	METAL CHIP	330	5%	1/16W
R315	1-216-815-11	METAL CHIP	330	5%	1/16W
R318	1-216-295-91	SHORT	0		
R319	1-218-864-11	RES,CHIP	5.1K	0.50%	1/16W (DSR-40)
R319	1-218-865-11	RES,CHIP	5.6K	0.50%	1/16W (DSR-40P)
R320	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R321	1-218-851-11	RES,CHIP	1.5K	0.50%	1/16W
R322	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R339	1-216-864-11	METAL CHIP	0	5%	1/16W
R340	1-216-841-11	METAL CHIP	47K	5%	1/16W
R341	1-216-841-11	METAL CHIP	47K	5%	1/16W
R342	1-216-864-11	METAL CHIP	0	5%	1/16W
R343	1-216-840-11	METAL CHIP	39K	5%	1/16W
R344	1-216-821-11	METAL CHIP	1K	5%	1/16W
R345	1-216-821-11	METAL CHIP	1K	5%	1/16W
R346	1-216-833-11	METAL CHIP	10K	5%	1/16W
R347	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R401	1-216-821-11	METAL CHIP	1K	5%	1/16W
R422	1-216-805-11	METAL CHIP	47	5%	1/16W
R423	1-216-805-11	METAL CHIP	47	5%	1/16W
R424	1-216-805-11	METAL CHIP	47	5%	1/16W

Ref. No.	Part No.	Description			Remark
R425	1-216-833-11	METAL CHIP	10K	5%	1/16W
R426	1-216-821-11	METAL CHIP	1K	5%	1/16W
R427	1-216-833-11	METAL CHIP	10K	5%	1/16W
R428	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R429	1-216-845-11	METAL CHIP	100K	5%	1/16W
R430	1-216-805-11	METAL CHIP	47	5%	1/16W
R431	1-216-817-11	METAL CHIP	470	5%	1/16W
R432	1-216-845-11	METAL CHIP	100K	5%	1/16W
R433	1-216-845-11	METAL CHIP	100K	5%	1/16W
R434	1-216-805-11	METAL CHIP	47	5%	1/16W
R435	1-216-845-11	METAL CHIP	100K	5%	1/16W
R437	1-216-864-11	METAL CHIP	0	5%	1/16W
R438	1-216-864-11	METAL CHIP	0	5%	1/16W
R439	1-216-864-11	METAL CHIP	0	5%	1/16W
R440	1-216-833-11	METAL CHIP	10K	5%	1/16W
R441	1-216-833-11	METAL CHIP	10K	5%	1/16W
R442	1-216-815-11	METAL CHIP	330	5%	1/16W
R443	1-216-805-11	METAL CHIP	47	5%	1/16W
R444	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R445	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R446	1-216-845-11	METAL CHIP	100K	5%	1/16W
R447	1-216-845-11	METAL CHIP	100K	5%	1/16W
R448	1-216-845-11	METAL CHIP	100K	5%	1/16W
R449	1-216-821-11	METAL CHIP	1K	5%	1/16W
R450	1-216-857-11	METAL CHIP	1M	5%	1/16W
R451	1-216-845-11	METAL CHIP	100K	5%	1/16W
R452	1-216-845-11	METAL CHIP	100K	5%	1/16W
R453	1-216-845-11	METAL CHIP	100K	5%	1/16W
R454	1-216-845-11	METAL CHIP	100K	5%	1/16W
R455	1-216-845-11	METAL CHIP	100K	5%	1/16W
R456	1-216-845-11	METAL CHIP	100K	5%	1/16W
R457	1-216-845-11	METAL CHIP	100K	5%	1/16W
R458	1-216-845-11	METAL CHIP	100K	5%	1/16W
R459	1-216-845-11	METAL CHIP	100K	5%	1/16W
R460	1-216-845-11	METAL CHIP	100K	5%	1/16W
R461	1-216-864-11	METAL CHIP	0	5%	1/16W
R462	1-216-864-11	METAL CHIP	0	5%	1/16W
R463	1-216-864-11	METAL CHIP	0	5%	1/16W
R464	1-216-864-11	METAL CHIP	0	5%	1/16W
R465	1-216-864-11	METAL CHIP	0	5%	1/16W
R466	1-216-864-11	METAL CHIP	0	5%	1/16W
R467	1-216-864-11	METAL CHIP	0	5%	1/16W
R468	1-216-864-11	METAL CHIP	0	5%	1/16W
R469	1-216-821-11	METAL CHIP	1K	5%	1/16W
R470	1-216-821-11	METAL CHIP	1K	5%	1/16W
R471	1-216-821-11	METAL CHIP	1K	5%	1/16W
R472	1-216-821-11	METAL CHIP	1K	5%	1/16W
R502	1-216-809-11	METAL CHIP	100	5%	1/16W
R503	1-216-809-11	METAL CHIP	100	5%	1/16W
R504	1-216-864-11	METAL CHIP	0	5%	1/16W
R505	1-216-809-11	METAL CHIP	100	5%	1/16W
R506	1-216-864-11	METAL CHIP	0	5%	1/16W
R507	1-216-809-11	METAL CHIP	100	5%	1/16W
R508	1-216-864-11	METAL CHIP	0	5%	1/16W
R509	1-216-833-11	METAL CHIP	10K	5%	1/16W
R510	1-216-864-11	METAL CHIP	0	5%	1/16W
R511	1-216-833-11	METAL CHIP	10K	5%	1/16W
R512	1-216-809-11	METAL CHIP	100	5%	1/16W
R513	1-216-809-11	METAL CHIP	100	5%	1/16W
R514	1-216-809-11	METAL CHIP	100	5%	1/16W

Ref. No.	Part No.	Description			Remark
R515	1-216-809-11	METAL CHIP	100	5%	1/16W
R517	1-216-809-11	METAL CHIP	100	5%	1/16W
R518	1-216-809-11	METAL CHIP	100	5%	1/16W
R524	1-216-841-11	METAL CHIP	47K	5%	1/16W
R526	1-216-841-11	METAL CHIP	47K	5%	1/16W
R529	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R530	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R531	1-216-809-11	METAL CHIP	100	5%	1/16W
R532	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R533	1-216-809-11	METAL CHIP	100	5%	1/16W
R534	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R535	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R536	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R537	1-216-841-11	METAL CHIP	47K	5%	1/16W
R538	1-216-841-11	METAL CHIP	47K	5%	1/16W
R539	1-216-841-11	METAL CHIP	47K	5%	1/16W
R540	1-216-841-11	METAL CHIP	47K	5%	1/16W
R541	1-216-841-11	METAL CHIP	47K	5%	1/16W
R542	1-216-841-11	METAL CHIP	47K	5%	1/16W
R543	1-216-821-11	METAL CHIP	1K	5%	1/16W
R544	1-216-821-11	METAL CHIP	1K	5%	1/16W
R545	1-216-821-11	METAL CHIP	1K	5%	1/16W
R546	1-216-791-11	METAL CHIP	3.3	5%	1/16W
R547	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R548	1-216-821-11	METAL CHIP	1K	5%	1/16W
R549	1-216-821-11	METAL CHIP	1K	5%	1/16W
R550	1-216-841-11	METAL CHIP	47K	5%	1/16W
R551	1-216-821-11	METAL CHIP	1K	5%	1/16W
R553	1-216-797-11	METAL CHIP	10	5%	1/16W
R554	1-216-797-11	METAL CHIP	10	5%	1/16W
R555	1-216-833-11	METAL CHIP	10K	5%	1/16W
R556	1-216-833-11	METAL CHIP	10K	5%	1/16W
R557	1-216-833-11	METAL CHIP	10K	5%	1/16W
R558	1-216-821-11	METAL CHIP	1K	5%	1/16W
R559	1-216-821-11	METAL CHIP	1K	5%	1/16W
R560	1-216-821-11	METAL CHIP	1K	5%	1/16W
R561	1-216-821-11	METAL CHIP	1K	5%	1/16W
R562	1-216-821-11	METAL CHIP	1K	5%	1/16W
R563	1-216-821-11	METAL CHIP	1K	5%	1/16W
R564	1-219-570-11	RES,CHIP	10M	5%	1/16W
R565	1-216-864-11	METAL CHIP	0	5%	1/16W
R566	1-216-821-11	METAL CHIP	1K	5%	1/16W
R567	1-216-821-11	METAL CHIP	1K	5%	1/16W
R568	1-216-821-11	METAL CHIP	1K	5%	1/16W
R569	1-216-821-11	METAL CHIP	1K	5%	1/16W
R570	1-216-841-11	METAL CHIP	47K	5%	1/16W
R571	1-216-841-11	METAL CHIP	47K	5%	1/16W
R572	1-216-845-11	METAL CHIP	100K	5%	1/16W
R573	1-216-821-11	METAL CHIP	1K	5%	1/16W
R574	1-216-797-11	METAL CHIP	10	5%	1/16W
R575	1-216-821-11	METAL CHIP	1K	5%	1/16W
R576	1-216-797-11	METAL CHIP	10	5%	1/16W
R577	1-216-797-11	METAL CHIP	10	5%	1/16W
R578	1-216-821-11	METAL CHIP	1K	5%	1/16W
R579	1-216-841-11	METAL CHIP	47K	5%	1/16W
R580	1-216-833-11	METAL CHIP	10K	5%	1/16W
R581	1-216-841-11	METAL CHIP	47K	5%	1/16W
R582	1-216-841-11	METAL CHIP	47K	5%	1/16W
R583	1-216-841-11	METAL CHIP	47K	5%	1/16W
R584	1-216-841-11	METAL CHIP	47K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R585	1-216-841-11	METAL CHIP	47K	5%	1/16W
R586	1-216-837-11	METAL CHIP	22K	5%	1/16W
R587	1-216-837-11	METAL CHIP	22K	5%	1/16W
R701	1-216-833-11	METAL CHIP	10K	5%	1/16W
R702	1-216-821-11	METAL CHIP	1K	5%	1/16W
R703	1-216-857-11	METAL CHIP	1M	5%	1/16W
R704	1-216-833-11	METAL CHIP	10K	5%	1/16W
R705	1-216-833-11	METAL CHIP	10K	5%	1/16W
R706	1-216-821-11	METAL CHIP	1K	5%	1/16W
R707	1-216-845-11	METAL CHIP	100K	5%	1/16W
R708	1-216-864-11	METAL CHIP	0	5%	1/16W
R709	1-216-845-11	METAL CHIP	100K	5%	1/16W
R710	1-216-845-11	METAL CHIP	100K	5%	1/16W
R711	1-216-833-11	METAL CHIP	10K	5%	1/16W
R712	1-216-833-11	METAL CHIP	10K	5%	1/16W
R713	1-216-845-11	METAL CHIP	100K	5%	1/16W
R714	1-216-833-11	METAL CHIP	10K	5%	1/16W
R715	1-216-845-11	METAL CHIP	100K	5%	1/16W
R717	1-218-873-11	RES,CHIP	12K	0.50%	1/16W
R718	1-218-873-11	RES,CHIP	12K	0.50%	1/16W
R719	1-216-864-11	METAL CHIP	0	5%	1/16W
R720	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R721	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R722	1-216-806-11	RES,CHIP	56	5%	1/16W
R723	1-216-806-11	RES,CHIP	56	5%	1/16W
R724	1-216-806-11	RES,CHIP	56	5%	1/16W
R725	1-216-806-11	RES,CHIP	56	5%	1/16W
R726	1-216-845-11	METAL CHIP	100K	5%	1/16W
R727	1-216-864-11	METAL CHIP	0	5%	1/16W
R801	1-216-833-11	METAL CHIP	10K	5%	1/16W
R802	1-216-845-11	METAL CHIP	100K	5%	1/16W
R803	1-216-809-11	METAL CHIP	100	5%	1/16W
R813	1-216-837-11	METAL CHIP	22K	5%	1/16W
R814	1-216-142-00	RES,CHIP	4.7	5%	1/8W
R818	1-216-845-11	METAL CHIP	100K	5%	1/16W
R819	1-216-837-11	METAL CHIP	22K	5%	1/16W
R821	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R822	1-216-845-11	METAL CHIP	100K	5%	1/16W
R823	1-216-845-11	METAL CHIP	100K	5%	1/16W
R824	1-216-845-11	METAL CHIP	100K	5%	1/16W
R826	1-216-864-11	METAL CHIP	0	5%	1/16W
R829	1-216-864-11	METAL CHIP	0	5%	1/16W
R830	1-216-833-11	METAL CHIP	10K	5%	1/16W
R831	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R832	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R833	1-216-833-11	METAL CHIP	10K	5%	1/16W
R834	1-216-833-11	METAL CHIP	10K	5%	1/16W
R835	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R836	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R837	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R838	1-216-809-11	METAL CHIP	100	5%	1/16W
R839	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R840	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R841	1-216-809-11	METAL CHIP	100	5%	1/16W
R842	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R843	1-216-809-11	METAL CHIP	100	5%	1/16W
R844	1-216-833-11	METAL CHIP	10K	5%	1/16W
R845	1-216-809-11	METAL CHIP	100	5%	1/16W
R847	1-216-833-11	METAL CHIP	10K	5%	1/16W
R850	1-218-870-11	RES,CHIP	9.1K	0.50%	1/16W

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Ref. No.	Part No.	Description			Remark
R852	1-216-809-11	METAL CHIP	100	5%	1/16W
R853	1-216-833-11	METAL CHIP	10K	5%	1/16W
R854	1-216-833-11	METAL CHIP	10K	5%	1/16W
R855	1-218-870-11	RES,CHIP	9.1K	0.50%	1/16W
R856	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R857	1-216-809-11	METAL CHIP	100	5%	1/16W
R858	1-218-707-11	RES,CHIP	4.3K	5%	1/16W
R859	1-216-809-11	METAL CHIP	100	5%	1/16W
R860	1-218-707-11	RES,CHIP	4.3K	5%	1/16W
R861	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R863	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R866	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R867	1-216-809-11	METAL CHIP	100	5%	1/16W
R868	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R869	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R870	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R871	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R872	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R873	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R875	1-218-839-11	RES,CHIP	470	0.50%	1/16W
R876	1-218-839-11	RES,CHIP	470	0.50%	1/16W
R877	1-218-839-11	RES,CHIP	470	0.50%	1/16W
R878	1-218-839-11	RES,CHIP	470	0.50%	1/16W
R879	1-216-864-11	METAL CHIP	0	5%	1/16W
R880	1-216-815-11	METAL CHIP	330	5%	1/16W
R881	1-216-815-11	METAL CHIP	330	5%	1/16W
R885	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R886	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R887	1-216-833-11	METAL CHIP	10K	5%	1/16W
R888	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R889	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R890	1-216-849-11	METAL CHIP	220K	5%	1/16W
R891	1-208-813-11	RES,CHIP	20K	0.50%	1/10W
R893	1-216-833-11	METAL CHIP	10K	5%	1/16W
R894	1-216-809-11	METAL CHIP	100	5%	1/16W
R895	1-216-833-11	METAL CHIP	10K	5%	1/16W
R896	1-216-809-11	METAL CHIP	100	5%	1/16W
R897	1-208-813-11	RES,CHIP	20K	0.50%	1/10W
R899	1-216-864-11	METAL CHIP	0	5%	1/16W
R903	1-216-864-11	METAL CHIP	0	5%	1/16W
R904	1-216-838-11	METAL CHIP	27K	5%	1/16W
R905	1-216-821-11	METAL CHIP	1K	5%	1/16W
R906	1-218-883-11	RES,CHIP	33K	0.50%	1/16W
R907	1-216-821-11	METAL CHIP	1K	5%	1/16W
R908	1-216-864-11	METAL CHIP	0	5%	1/16W
R909	1-216-864-11	METAL CHIP	0	5%	1/16W
R913	1-216-821-11	METAL CHIP	1K	5%	1/16W
R918	1-216-821-11	METAL CHIP	1K	5%	1/16W
R919	1-216-864-11	METAL CHIP	0	5%	1/16W
R920	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R921	1-218-875-11	RES,CHIP	15K	0.50%	1/16W
R923	1-216-178-00	RES,CHIP	150	5%	1/8W
R924	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R926	1-216-857-11	METAL CHIP	1M	5%	1/16W
R936	1-216-845-11	METAL CHIP	100K	5%	1/16W
R937	1-216-845-11	METAL CHIP	100K	5%	1/16W
R938	1-216-847-11	METAL CHIP	150K	5%	1/16W
R939	1-216-833-11	METAL CHIP	10K	5%	1/16W
R941	1-216-864-11	METAL CHIP	0	5%	1/16W
R943	1-216-864-11	METAL CHIP	0	5%	1/16W

Ref. No.	Part No.	Description			Remark
R944	1-216-833-11	METAL CHIP	10K	5%	1/16W
R950	1-216-821-11	METAL CHIP	1K	5%	1/16W
R951	1-216-821-11	METAL CHIP	1K	5%	1/16W
R952	1-216-821-11	METAL CHIP	1K	5%	1/16W
R953	1-216-821-11	METAL CHIP	1K	5%	1/16W
R954	1-216-821-11	METAL CHIP	1K	5%	1/16W
R955	1-216-821-11	METAL CHIP	1K	5%	1/16W
R956	1-216-821-11	METAL CHIP	1K	5%	1/16W
R957	1-216-842-11	METAL CHIP	56K	5%	1/16W
R958	1-216-845-11	METAL CHIP	100K	5%	1/16W
R959	1-216-833-11	METAL CHIP	10K	5%	1/16W
R960	1-216-841-11	METAL CHIP	47K	5%	1/16W
R962	1-216-821-11	METAL CHIP	1K	5%	1/16W
R964	1-216-838-11	METAL CHIP	27K	5%	1/16W
R965	1-216-833-11	METAL CHIP	10K	5%	1/16W
R966	1-216-833-11	METAL CHIP	10K	5%	1/16W
R967	1-216-833-11	METAL CHIP	10K	5%	1/16W
R968	1-216-841-11	METAL CHIP	47K	5%	1/16W
R969	1-216-841-11	METAL CHIP	47K	5%	1/16W
R970	1-216-833-11	METAL CHIP	10K	5%	1/16W
R971	1-216-813-11	METAL CHIP	220	5%	1/16W
R972	1-216-841-11	METAL CHIP	47K	5%	1/16W
R973	1-216-864-11	METAL CHIP	0	5%	1/16W
R974	1-216-838-11	METAL CHIP	27K	5%	1/16W
R975	1-216-841-11	METAL CHIP	47K	5%	1/16W
R976	1-216-845-11	METAL CHIP	100K	5%	1/16W
R978	1-216-813-11	METAL CHIP	220	5%	1/16W
R980	1-216-841-11	METAL CHIP	47K	5%	1/16W
R981	1-216-821-11	METAL CHIP	1K	5%	1/16W
R982	1-216-833-11	METAL CHIP	10K	5%	1/16W
R983	1-216-821-11	METAL CHIP	1K	5%	1/16W
R984	1-216-833-11	METAL CHIP	10K	5%	1/16W
R986	1-216-864-11	METAL CHIP	0	5%	1/16W
R987	1-216-864-11	METAL CHIP	0	5%	1/16W
R988	1-216-864-11	METAL CHIP	0	5%	1/16W
R989	1-216-864-11	METAL CHIP	0	5%	1/16W
R990	1-216-813-11	METAL CHIP	220	5%	1/16W
R991	1-216-813-11	METAL CHIP	220	5%	1/16W
R992	1-216-864-11	METAL CHIP	0	5%	1/16W
RR001	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
RR002	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)

< VARIABLE RESISTOR >

RV001	1-238-855-11	RES, ADJ, CERMET 4.7K(A/D CONV.REF REG1)
RV002	1-238-855-11	RES, ADJ, CERMET 4.7K(A/D CONV.REF REG2)
RV010	1-238-854-11	RES, ADJ, CERMET 2.2K(CR CLAMP REF REG)
RV011	1-238-853-11	RES, ADJ, CERMET 1K(Y CLAMP REF REG)
RV012	1-238-854-11	RES, ADJ, CERMET 2.2K(CB CLAMP REF REG)
RV201	1-238-855-11	RES, ADJ, CERMET 4.7K (AFC PICTURE FRAME)

< VIBRATOR >

X421	1-760-655-21	VIBRATOR, CRYSTAL (20MHz)
X422	1-767-449-11	VIBRATOR, CRYSTAL (27MHz)
X501	1-767-450-11	VIBRATOR, CERAMIC (20MHz)
X502	1-760-458-21	VIBRATOR, CRYSTAL (32.768kHz)
X701	1-767-399-11	VIBRATOR, CRYSTAL (24.576MHz)
X702	1-760-497-21	VIBRATOR, LITHIUM NIOBATE (6MHz)

Ref. No.	Part No.	Description			Remark
X801	1-767-779-21	VIBRATOR, CRYSTAL (49.152MHz)			

MD-63 BOARD, COMPLETE
****
(Ref No. 8,000 Series)

< CAPACITOR >

C101	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C102	1-163-031-11	CERAMIC CHIP	0.01uF		50V

< CONNECTOR >

CN101	1-770-646-11	CONNECTOR, FFC/FPC 16P

< DIODE >

D101	8-719-989-52	DIODE GL4600S

< IC >

IC101	8-719-820-44	IC PHOTO COUPLER TLP907-0 (SONY2)
IC102	8-719-820-44	IC PHOTO COUPLER TLP907-0 (SONY2)
IC103	8-759-510-71	IC BA10358F-E2
IC105	8-719-821-03	IC ELEMENT, HALL THS117-TE85L

< JUMPER RESISTOR >

JR101	1-216-296-91	SHORT	0
JR102	1-216-296-91	SHORT	0
JR103	1-216-296-91	SHORT	0
JR104	1-216-296-91	SHORT	0
JR105	1-216-296-91	SHORT	0

< TRANSISTOR >

Q102	8-729-012-46	PHOTO TRANSISTOR PT4600FS

< RESISTOR >

R101	1-216-031-00	METAL CHIP	180	5%	1/10W
R102	1-216-081-00	METAL CHIP	22K	5%	1/10W
R103	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R107	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R108	1-216-047-91	RES, CHIP	820	5%	1/10W
R109	1-216-081-00	METAL CHIP	22K	5%	1/10W

< VARIABLE RESISTOR >

RV101	1-238-858-11	RES, ADJ, CERMET 47K
RV102	1-238-862-11	RES, ADJ, CERMET 1M

< SWITCH >

S101	1-572-719-11	SWITCH, PUSH (1 KEY)

MD-64 BOARD, COMPLETE
****
(Ref No. 8,000 Series)

< CAPACITOR >

C001	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C002	1-163-031-11	CERAMIC CHIP	0.01uF		50V

Ref. No.	Part No.	Description			Remark

< CONNECTOR >

CN002	1-770-692-11	CONNECTOR, FFC/FPC 9P

< IC >

IC003	8-719-820-44	IC PHOTO COUPLER TLP907-0 (SONY2)
IC004	8-719-820-44	IC PHOTO COUPLER TLP907-0 (SONY2)
IC005	8-759-510-71	IC BA10358F-E2
IC006	8-719-821-03	IC ELEMENT, HALL THS117-TE85L

< JUMPER RESISTOR >

JR001	1-216-296-91	SHORT	0
JR002	1-216-296-91	SHORT	0

< TRANSISTOR >

Q001	8-729-012-46	PHOTO TRANSISTOR PT4600FS

< RESISTOR >

R002	1-216-031-00	METAL CHIP	180	5%	1/10W
R003	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R004	1-216-081-00	METAL CHIP	22K	5%	1/10W
R005	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R007	1-216-081-00	METAL CHIP	22K	5%	1/10W
R008	1-216-047-91	RES, CHIP	820	5%	1/10W

< VARIABLE RESISTOR >

RV001	1-238-858-11	RES, ADJ, CERMET 47K
RV002	1-238-862-11	RES, ADJ, CERMET 1M

< SWITCH >

S002	1-762-558-11	SWITCH, PUSH (C DOWN)

MD-65 BOARD, COMPLETE
****
(Ref No. 8,000 Series)

< CONNECTOR >

CN201	1-766-830-21	CONNECTOR, FFC/FPC (ZIF) 11P
CN202	1-774-771-11	CONNECTOR, FFC/FPC 14P
CN203	1-564-001-11	PIN, CONNECTOR 2P
CN204	1-750-620-11	CONNECTOR (MM8 MD)

< JUMPER RESISTOR >

JR201	1-216-296-91	SHORT	0

⚠	1-468-377-11	POWER BLOCK (U-1) (DSR-40)			
⚠	1-468-378-11	POWER BLOCK (U-1) (DSR-40P)			

****
(Ref.No. 30,000 Series)

< CAPACITOR >

⚠C1	1-104-705-11	FILM	0.1uF	20%	250V (DSR-40)
⚠C1	1-104-706-11	FILM	0.22uF	20%	250V (DSR-40P)
⚠C2	1-104-705-11	FILM	0.1uF	20%	250V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

POWER BLOCK (U-1)

Ref. No.	Part No.	Description			Remark
⚠C3	1-115-383-11	CERAMIC	0.001uF	10%	125V (DSR-40)
⚠C3	1-127-786-11	CERAMIC	680PF	10%	250V (DSR-40P)
⚠C4	1-115-383-11	CERAMIC	0.001uF	10%	125V (DSR-40)
⚠C4	1-127-786-11	CERAMIC	680PF	10%	250V (DSR-40P)
⚠C5	1-115-383-11	CERAMIC	0.001uF	10%	125V (DSR-40)
⚠C5	1-127-786-11	CERAMIC	680PF	10%	250V (DSR-40P)
⚠C6	1-104-705-11	FILM	0.1uF	20%	250V
C7	1-115-383-11	CERAMIC	0.001uF	10%	125V
C8	1-115-383-11	CERAMIC	0.001uF	10%	125V
⚠C9	9-880-364-01	ELECT	470uF		200V (DSR-40)
⚠C9	1-117-188-11	ELECT	150uF	20%	400V (DSR-40P)
C10	9-880-365-01	FILM	0.01uF		630V
C11	9-880-366-01	CERAMIC	680PF (DSR-40)		
C11	9-880-424-01	CERAMIC	330PF (DSR-40P)		
C12	9-880-366-01	CERAMIC	680PF (DSR-40)		
C12	9-880-424-01	CERAMIC	330PF (DSR-40P)		
C13	1-126-802-11	ELECT	10uF	20%	50V
C14	1-126-802-11	ELECT	10uF	20%	50V
C15	1-104-790-51	ELECT	2.2uF	20%	50V
C16	9-880-367-01	FILM	0.1uF		
C17	9-880-368-01	FILM	470PF		
C18	9-880-369-01	FILM	0.15uF		
C19	9-880-370-01	FILM	0.033uF		
C20	1-126-802-11	ELECT	10uF	20%	50V
C21	9-880-371-01	CERAMIC	0.001uF		
C22	9-880-371-01	CERAMIC	0.001uF		
C27	1-115-788-11	ELECT	820uF	20%	25V
C28	1-115-788-11	ELECT	820uF	20%	25V
C29	9-880-367-01	FILM	0.1uF		
C31	9-880-367-01	FILM	0.1uF		
C32	9-880-367-01	FILM	0.1uF		
C33	1-115-788-11	ELECT	820uF	20%	25V
		< CONNECTOR >			
* CN1	1-580-230-31	PIN, CONNECTOR (FOR BOARD) 2P			
* CN3	9-882-860-01	BOARD IN HARNESS 4P			
		< DIODE >			
⚠D1	8-719-500-58	DIODE	D3SBA60		
D4	8-719-979-63	DIODE	UF4005 (DSR-40)		
D4	8-719-053-19	DIODE	UF4007 (DSR-40P)		
D5	8-719-110-72	DIODE	RD30ESB2		
D6	8-719-110-72	DIODE	RD30ESB2		
D8	8-719-053-20	DIODE	UF4003P		
D9	8-719-109-85	DIODE	RD5.1ESB2		
D10	8-719-510-39	DIODE	D10LC20U		
D11	8-719-109-97	DIODE	RD6.8ESB2		
D12	8-719-110-41	DIODE	RD15ESB2		

Ref. No.	Part No.	Description			Remark
		< FUSE >			
⚠F1	9-880-385-01	FUSE (3.15A/125V) (DSR-40)			
⚠F1	9-882-875-01	FUSE (3.15A/250V) (DSR-40P)			
		< COIL >			
⚠L1	9-880-379-01	INDUCTOR 6mH (DSR-40)			
⚠L1	9-880-431-01	INDUCTOR 15mH (DSR-40P)			
⚠L2	9-880-380-01	INDUCTOR 5.6mH (DSR-40)			
⚠L2	9-880-432-01	INDUCTOR 22mH (DSR-40P)			
		< TRANSISTOR >			
Q1	8-729-037-96	TRANSISTOR 2SK2366 (DSR-40)			
Q1	9-880-423-01	TRANSISTOR 2SK2483 (DSR-40P)			
Q3	8-729-281-53	TRANSISTOR 2SC1815-GR			
		< RESISTOR >			
⚠R1	9-880-373-01	METAL OXIDE	220K		1W (DSR-40)
⚠R1	9-880-427-01	METAL OXIDE	330K		1W (DSR-40P)
R2	1-216-486-11	METAL OXIDE	82K		2W (DSR-40)
R2	9-880-428-01	METAL OXIDE	270K		2W (DSR-40P)
R3	1-212-865-11	CARBON	22	5%	1/4W F
R4	1-247-879-11	CARBON	100K	5%	1/4W
R5	1-215-884-11	METAL OXIDE	47	5%	2W
R7	9-880-375-01	METAL OXIDE	18K		2W (DSR-40)
R7	1-216-468-11	METAL OXIDE	82K		2W (DSR-40P)
R8	9-880-376-01	METAL OXIDE	0.22		5W (DSR-40)
R8	9-880-429-01	METAL OXIDE	0.47		5W (DSR-40P)
R9	1-216-377-11	METAL OXIDE	4.7	5%	2W
R10	1-215-426-11	METAL	5.1K	1%	1/4W
R11	1-247-819-11	CARBON	330	5%	1/4W (DSR-40)
R11	1-247-831-11	CARBON	1K	5%	1/4W (DSR-40P)
R12	1-215-389-11	METAL	47	1%	1/4W
R13	1-215-385-11	METAL	33	1%	1/4W
R14	1-247-857-11	CARBON	12K	5%	1/4W
R18	1-247-847-11	CARBON	4.7K	5%	1/4W
R19	1-247-847-11	CARBON	4.7K	5%	1/4W
R20	1-247-839-11	CARBON	2.2K	5%	1/4W
R21	1-247-831-11	CARBON	1K	5%	1/4W
R22	1-247-843-11	CARBON	3.3K	5%	1/4W
R23	1-247-795-11	CARBON	33	5%	1/4W
R24	1-215-427-11	METAL	1.8K	1%	1/4W
R25	1-215-427-11	METAL	1.8K	1%	1/4W
R26	1-215-433-11	METAL	3.3K	1%	1/4W
R27	1-247-831-11	CARBON	1K	5%	1/4W
R28	9-880-375-01	METAL OXIDE	18K		2W (DSR-40)
R28	1-216-468-11	METAL OXIDE	82K		2W (DSR-40P)

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POWER BLOCK (U-1) | POWER BLOCK (U-2)

Ref. No.	Part No.	Description	Remark
R30	1-215-925-11	METAL OXIDE 22K	3W
		< VARIABLE RESISTOR >	
RV1	9-880-377-01	RES, VAR, CARBON 3K (DSR-40)	
RV1	9-882-873-01	RES, VAR, CARBON 1K (DSR-40P)	
		< TRANSFORMER >	
⚠T1	9-882-859-01	TRANSFORMER, POWER (DSR-40)	
⚠T1	9-882-874-01	TRANSFORMER, POWER (DSR-40P)	
		< THERMISTOR >	
TH1	9-880-384-01	THERMISTOR 8Ω	
		< IC >	
Z1	8-759-464-69	IC FA5317P	
⚠Z2	8-749-924-80	PHOTO COUPLER PS2561L1-1-V	
⚠Z3	8-749-924-80	PHOTO COUPLER PS2561L1-1-V	

⚠	1-468-377-11	POWER BLOCK (U-2) (DSR-40)			
⚠	1-468-378-11	POWER BLOCK (U-2) (DSR-40P)			
		**********			
		(Ref.No. 40,000 Series)			
		< CAPACITOR >			
C1	1-115-781-11	ELECT	820uF	20%	25V
C2	1-115-781-11	ELECT	820uF	20%	25V
C3	9-880-339-01	FILM	0.047uF		
C4	1-115-781-11	ELECT	820uF	20%	25V
C5	1-115-787-11	ELECT	820uF	20%	25V
C7	9-880-407-01	CERAMIC	2200PF		
C8	9-880-407-01	CERAMIC	2200PF		
C9	1-115-737-11	ELECT	1000uF	20%	10V
C10	1-115-737-11	ELECT	1000uF	20%	10V
C11	9-880-402-01	FILM	0.01uF		
C12	9-880-406-01	ELECT	680uF	20%	10V
C13	9-880-406-01	ELECT	680uF	20%	10V
C14	9-880-339-01	FILM	0.047uF		
C15	9-880-339-01	FILM	0.047uF		
C16	9-880-339-01	FILM	0.047uF		
C17	9-880-339-01	FILM	0.047uF		
C18	1-115-730-11	ELECT	180uF	20%	10V
C19	1-115-730-11	ELECT	180uF	20%	10V
C20	1-115-730-11	ELECT	180uF	20%	10V
C21	1-115-754-11	ELECT	120uF	20%	16V
C22	9-880-339-01	FILM	0.047uF		
C23	9-880-339-01	FILM	0.047uF		
C24	9-880-339-01	FILM	0.047uF		
C25	9-880-339-01	FILM	0.047uF		
C26	1-115-785-11	ELECT	470uF	20%	25V
C27	9-880-339-01	FILM	0.047uF		
C28	9-880-407-01	CERAMIC	2200PF		
C29	9-880-407-01	CERAMIC	2200PF		
C30	9-880-406-01	ELECT	680uF	20%	10V
C31	9-880-406-01	ELECT	680uF	20%	10V
C32	9-880-402-01	FILM	0.01uF		
C33	9-880-406-01	ELECT	680uF	20%	10V
C34	1-115-785-11	ELECT	470uF	20%	25V
C36	9-880-407-01	CERAMIC	2200PF		
C37	9-880-407-01	CERAMIC	2200PF		
C38	1-124-534-11	ELECT	680uF	20%	16V
C40	1-124-534-11	ELECT	680uF	20%	16V
C41	9-880-339-01	FILM	0.047uF		
C42	9-880-339-01	FILM	0.047uF		
C43	9-880-339-01	FILM	0.047uF		
C44	1-115-730-11	ELECT	180uF	20%	10V
C45	1-115-754-11	ELECT	120uF	20%	16V
C46	1-115-754-11	ELECT	120uF	20%	16V
C47	1-117-154-11	ELECT	33uF	20%	16V
C48	9-880-652-01	ELECT	100uF	20%	10V
C49	9-880-652-01	ELECT	100uF	20%	10V
C50	1-117-154-11	ELECT	33uF	20%	16V
C51	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C52	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C53	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C54	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C55	1-107-682-91	CERAMIC CHIP	1uF	10%	16V
C56	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C57	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C58	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C59	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C60	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C61	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C62	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C63	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C64	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C65	1-115-566-91	CERAMIC CHIP	4.7uF	10%	10V
C66	1-107-682-91	CERAMIC CHIP	1uF	10%	16V
C67	1-107-682-91	CERAMIC CHIP	1uF	10%	16V
C68	1-107-682-91	CERAMIC CHIP	1uF	10%	16V
C69	1-107-682-91	CERAMIC CHIP	1uF	10%	16V
C70	9-882-863-01	FILM	0.1uF		
C71	9-882-863-01	FILM	0.1uF		
		< CONNECTOR >			
* CN1	9-880-417-01	PIN, CONNECTOR 4P			
* CN10	1-564-018-11	PIN, CONNECTOR 8P			
* CN11	1-564-019-11	PIN, CONNECTOR 9P			
* CN12	1-564-021-11	PIN, CONNECTOR 11P			
* CN13	1-564-012-11	PIN, CONNECTOR 2P			
		< DIODE >			
D1	8-719-109-89	DIODE RD5.6ESB2			
D2	8-719-500-70	DIODE D5S4M			
D3	8-719-107-94	DIODE 1SS202-1			
D4	8-719-107-94	DIODE 1SS202-1			
D5	8-719-107-94	DIODE 1SS202-1			
D7	8-719-018-83	DIODE D2S4M			
D8	8-719-500-70	DIODE D5S4M			
		< COIL >			
L1	1-459-407-11	INDUCTOR 30uH			
L2	9-882-865-01	INDUCTOR 15uH			
L3	9-882-866-01	INDUCTOR 130uH			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

POWER BLOCK (U-2) RE-33

Ref. No.	Part No.	Description				Remark
L4	9-882-867-01	INDUCTOR 15uH				
L5	9-880-412-01	INDUCTOR 15uH				
L6	9-880-412-01	INDUCTOR 15uH				
L7	9-880-412-01	INDUCTOR 15uH				
L8	9-882-868-01	INDUCTOR 450uH				
L9	9-882-869-01	INDUCTOR 15uH				
L10	9-882-870-01	INDUCTOR 130uH				
L11	9-882-871-01	INDUCTOR				
		< TRANSISTOR >				
Q1	8-729-201-53	TRANSISTOR 2SA1015				
Q2	8-729-201-53	TRANSISTOR 2SA1015				
Q4	8-729-203-76	TRANSISTOR 2SC3328				
		< RESISTOR >				
R1	1-215-445-11	METAL	10K	1%	1/4W	
R2	1-215-427-11	METAL	1.8K	1%	1/4W	
R3	1-215-423-11	METAL	1.2K	1%	1/4W	
R4	1-216-431-11	METAL OXIDE	560	5%	1W	
R5	1-215-857-11	METAL OXIDE	10	5%	1W	
R6	1-215-443-11	METAL	8.2K	1%	1/4W	
R7	1-215-416-11	METAL	620	1%	1/4W	
R8	1-215-429-11	METAL	2.2K	1%	1/4W	
R9	1-247-835-11	CARBON	1.5K	5%	1/4W	
R10	1-215-443-11	METAL	8.2K	1%	1/4W	
R11	1-215-413-11	METAL	470	1%	1/4W	
R12	1-215-429-11	METAL	2.2K	1%	1/4W	
R13	1-215-439-11	METAL	5.6K	1%	1/4W	
R14	1-215-422-11	METAL	1.1K	1%	1/4W	
R15	1-215-429-11	METAL	2.2K	1%	1/4W	
R16	1-215-451-11	METAL	18K	1%	1/4W	
R17	1-215-421-11	METAL	1K	1%	1/4W	
R18	1-215-429-11	METAL	2.2K	1%	1/4W	
R19	1-247-831-11	CARBON	1K	5%	1/4W	
R20	1-247-845-11	CARBON	3.9K	5%	1/4W	
R21	1-247-801-11	CARBON	56	5%	1/4W	
R22	1-247-801-11	CARBON	56	5%	1/4W	
R23	1-247-801-11	CARBON	56	5%	1/4W	
R24	1-247-801-11	CARBON	56	5%	1/4W	
R25	1-247-831-11	CARBON	1K	5%	1/4W	
R26	1-247-847-11	CARBON	4.7K	5%	1/4W	
R29	1-247-855-11	CARBON	10K	5%	1/4W	
R30	1-215-857-11	METAL OXIDE	10	5%	1W	
R31	1-215-387-11	METAL	39	1%	1/4W	
R32	1-215-408-11	METAL	300	1%	1/4W	
R33	1-215-405-11	METAL	220	1%	1/4W	
R34	1-215-857-11	METAL OXIDE	10	5%	1W	
R35	1-215-431-11	METAL	2.7K	1%	1/4W	
R36	1-215-449-11	METAL	15K	1%	1/4W	
R37	1-215-445-11	METAL	10K	1%	1/4W	
R38	1-247-841-11	CARBON	2.7K	5%	1/4W	
R39	1-247-831-11	CARBON	1K	5%	1/4W	
R40	9-882-864-01	METAL	22	5%	1W	F
		< IC >				
Z1	8-759-293-98	IC PQ30RV21				
Z2	8-759-335-26	IC LM2576T-ADJ				
Z3	9-880-398-01	IC TD62305AP				
Z4	8-759-098-24	IC PQ30RV11				
Z5	9-880-397-01	IC PQ29L03L				
Z6	8-759-098-24	IC PQ30RV11				
Z7	8-759-098-24	IC PQ30RV11				
Z8	8-759-790-61	IC LM2575-ADJ-LB03				
Z9	8-759-355-26	IC LM2576T-ADJ				
Z10	8-759-392-17	IC uPC7908AHF				
Z11	8-759-333-80	IC LM2990T-12				
Z12	8-759-089-53	IC uPC79M05HF				

Ref. No.	Part No.	Description				Remark
*	A-7073-775-A	RE-33 BOARD, COMPLETE				
		**********				
		(Ref.No. 6,000 Series)				
		< CAPACITOR >				
C002	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V	
C003	1-126-400-11	ELECT	22uF	20%	35V	
C004	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V	
C006	1-126-400-11	ELECT	22uF	20%	35V	
C008	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	
C009	1-126-205-11	ELECT CHIP	47uF	20%	6.3V	
C010	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V	
C011	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V	
C012	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V	
C014	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V	
C020	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
		< CONNECTOR >				
CN001	1-774-043-11	CONNECTOR, FPC (DIP TYPE)26P				
CN002	1-506-479-11	PIN, CONNECTOR 14P				
* CN003	1-564-005-11	PIN, CONNECTOR 6P				
		< DIODE >				
D001	8-719-106-80	DIODE RD13M-T1B2				
D002	8-719-106-80	DIODE RD13M-T1B2				
D003	8-719-106-80	DIODE RD13M-T1B2				
D004	8-719-106-80	DIODE RD13M-T1B2				
D005	8-719-421-59	DIODE MA3075WA-(TX)				
D006	8-719-421-59	DIODE MA3075WA-(TX)				
D007	8-719-421-59	DIODE MA3075WA-(TX)				
D008	8-719-106-80	DIODE RD13M-T1B2				
D009	8-719-421-59	DIODE MA3075WA-(TX)				
D010	8-719-106-80	DIODE RD13M-T1B2				
D011	8-719-106-80	DIODE RD13M-T1B2				
D012	8-719-106-80	DIODE RD13M-T1B2				
D013	8-719-421-59	DIODE MA3075WA-(TX)				
D014	8-719-421-59	DIODE MA3075WA-(TX)				
D015	8-719-421-59	DIODE MA3075WA-(TX)				
D016	8-719-421-59	DIODE MA3075WA-(TX)				
D017	8-719-421-59	DIODE MA3075WA-(TX)				
D018	8-719-421-59	DIODE MA3075WA-(TX)				
D019	8-719-106-80	DIODE RD13M-T1B2				
D020	8-719-106-80	DIODE RD13M-T1B2				
D021	8-719-106-80	DIODE RD13M-T1B2				
D022	8-719-106-80	DIODE RD13M-T1B2				
D023	8-719-106-80	DIODE RD13M-T1B2				
D024	8-719-106-80	DIODE RD13M-T1B2				
D025	8-719-106-80	DIODE RD13M-T1B2				
D026	8-719-106-80	DIODE RD13M-T1B2				

Ref. No.	Part No.	Description			Remark
		< FERRITE BEAD >			
FB001	1-500-241-22	FERRITE	0UH		
FB002	1-500-241-22	FERRITE	0UH		
FB003	1-500-241-22	FERRITE	0UH		
FB004	1-500-241-22	FERRITE	0UH		
FB005	1-500-241-22	FERRITE	0UH		
FB006	1-500-241-22	FERRITE	0UH		
FB007	1-500-241-22	FERRITE	0UH		
FB008	1-500-241-22	FERRITE	0UH		
FB009	1-500-241-22	FERRITE	0UH		
FB010	1-500-241-22	FERRITE	0UH		
		< IC >			
IC001	8-759-745-64	IC NJM4560M-TE2			
		< JACK >			
J001	1-537-861-11	TERMINAL BOARD (INPUT/S VIDEO OUTPUT/MONITOR)			
* J002	1-764-066-11	CONNECTOR, BNC (VIDEO/Y OUTPUT)			
* J003	1-764-066-11	CONNECTOR, BNC (REF.VIDEO INPUT/R-Y OUTPUT)			
J004	1-785-572-11	CONNECTOR, BNC (B-Y OUTPUT)			
		< RESISTOR >			
R001	1-208-838-91	RES,CHIP	220K	0.50% 1/10W	
R002	1-208-838-91	RES,CHIP	220K	0.50% 1/10W	
R004	1-208-774-11	RES,CHIP	470	0.50% 1/10W	
R005	1-208-774-11	RES,CHIP	470	0.50% 1/10W	
R006	1-208-755-11	RES,CHIP	75	0.50% 1/10W	
R007	1-208-755-11	RES,CHIP	75	0.50% 1/10W	
R008	1-208-755-11	RES,CHIP	75	0.50% 1/10W	
R028	1-208-818-11	RES,CHIP	33K	0.50% 1/10W	
R029	1-208-818-11	RES,CHIP	33K	0.50% 1/10W	
R030	1-208-755-11	RES,CHIP	75	0.50% 1/10W	
R050	1-208-818-11	RES,CHIP	33K	0.50% 1/10W	
R051	1-208-818-11	RES,CHIP	33K	0.50% 1/10W	
*	A-7067-132-A	RP-228 BOARD, COMPLETE (DSR-40)			
*	A-7067-128-A	RP-228 BOARD, COMPLETE (DSR-40P)			
		********** (Ref.No. 7,000 Series)			
	1-776-149-11	CABLE, FLEXIBLE FLAT 30P			
	1-783-376-11	CABLE, FLEXIBLE FLAT (FFC-245)			
		< CAPACITOR >			
C146	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C148	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C701	1-164-174-11	CERAMIC CHIP	0.0082uF	10% 25V	
C702	1-162-967-11	CERAMIC CHIP	0.0033uF	10% 50V	
C703	1-164-174-11	CERAMIC CHIP	0.0082uF	10% 25V	
C704	1-162-967-11	CERAMIC CHIP	0.0033uF	10% 50V	
C705	1-164-173-11	CERAMIC CHIP	0.0039uF	10% 50V	
C706	1-164-173-11	CERAMIC CHIP	0.0039uF	10% 50V	
C761	1-164-360-11	CERAMIC CHIP	0.1uF	16V	
C762	1-164-360-11	CERAMIC CHIP	0.1uF	16V	
C763	1-164-360-11	CERAMIC CHIP	0.1uF	16V	
C770	1-135-201-11	TANTALUM CHIP	10uF	20% 4V	
C771	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C772	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C773	1-113-619-11	CERAMIC CHIP	0.47uF	10V	
C774	1-164-360-11	CERAMIC CHIP	0.1uF	16V	
C775	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C776	1-162-923-11	CERAMIC CHIP	47PF	5% 50V	
C777	1-162-923-11	CERAMIC CHIP	47PF	5% 50V	
C778	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C779	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C780	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C781	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C782	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C783	1-135-201-11	TANTALUM CHIP	10uF	20% 4V	
C784	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C786	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C788	1-104-851-11	TANTAL. CHIP	10uF	20% 10V	
C789	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C791	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C792	1-119-750-11	TANTAL. CHIP	22uF	20% 6.3V	
C793	1-107-826-91	CERAMIC CHIP	0.1uF	10% 16V	
C794	1-107-826-91	CERAMIC CHIP	0.1uF	10% 16V	
C795	1-128-004-11	ELECT CHIP	10uF	20% 16V	
C796	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C797	1-107-826-91	CERAMIC CHIP	0.1uF	10% 16V	
C798	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C799	1-164-217-11	CERAMIC CHIP	150PF	5% 50V	
C803	1-164-217-11	CERAMIC CHIP	150PF	5% 50V	
C811	1-113-619-11	CERAMIC CHIP	0.47uF	10V	
C813	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C814	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C815	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	
C816	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	
C817	1-104-851-11	TANTAL. CHIP	10uF	20% 10V	
C818	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V	
C819	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C821	1-164-360-11	CERAMIC CHIP	0.1uF	16V	
C822	1-164-360-11	CERAMIC CHIP	0.1uF	16V	
C823	1-164-360-11	CERAMIC CHIP	0.1uF	16V	
C824	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C825	1-164-315-11	CERAMIC CHIP	470PF	5% 50V	
C826	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C827	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C828	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C829	1-135-201-11	TANTALUM CHIP	10uF	20% 4V	
C830	1-164-360-11	CERAMIC CHIP	0.1uF	16V	
C831	1-135-259-11	TANTAL. CHIP	10uF	20% 6.3V	
C832	1-164-360-11	CERAMIC CHIP	0.1uF	16V	
C833	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C834	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C835	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C836	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C837	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C838	1-162-913-11	CERAMIC CHIP	8PF	0.5PF 50V	
C839	1-162-913-11	CERAMIC CHIP	8PF	0.5PF 50V	
C841	1-162-923-11	CERAMIC CHIP	47PF	5% 50V	
C842	1-164-360-11	CERAMIC CHIP	0.1uF	16V	
C843	1-164-677-11	CERAMIC CHIP	0.033uF	10% 16V	
C844	1-164-677-11	CERAMIC CHIP	0.033uF	10% 16V	
C845	1-164-357-11	CERAMIC CHIP	1000PF	5% 50V	
C847	1-162-974-11	CERAMIC CHIP	0.01uF	50V	
C848	1-104-851-11	TANTAL. CHIP	10uF	20% 10V	
C850	1-162-974-11	CERAMIC CHIP	0.01uF	50V	

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Ref. No.	Part No.	Description			Remark
C853	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C854	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C855	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C857	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C859	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C861	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C862	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C874	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C875	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
		< CONNECTOR >			
CN101	1-750-345-11	CONNECTOR, FFC/EPC (ZIF) 30P			
CN102	1-750-345-11	CONNECTOR, FFC/EPC (ZIF) 30P			
CN103	1-750-345-11	CONNECTOR, FFC/EPC (ZIF) 30P			
CN771	1-770-305-11	CONNECTOR, FFC/FPC 10P			
CN775	1-750-303-41	CONNECTOR, BOARD TO BOARD 20P			
		< DIODE >			
D771	8-719-404-50	DIODE MA111-TX			
D772	8-719-404-50	DIODE MA111-TX			
D773	8-719-055-86	DIODE KV1470TL1-3			
D774	8-719-052-27	DIODE 1SS351-TB			
D775	8-719-052-27	DIODE 1SS351-TB			
D791	8-719-404-50	DIODE MA111-TX			
		< FILTER >			
FL770	1-411-951-21	DELAY LINE, LC (23NS)			
FL771	1-233-734-21	FILTER, LOW PASS			
		< IC >			
IC770	8-759-445-93	IC AK6440AM-E2			
IC771	8-759-426-25	IC MB88346LPFV-G-BND-ER			
IC772	8-752-371-18	IC CXD2302Q-T4			
IC773	8-752-070-12	IC CXA1762Q-T4			
IC774	8-752-386-38	IC CXD3105R-T6			
IC775	8-752-074-59	IC CXA2023R-T4			
IC777	8-752-073-50	IC CXA2018Q-T4			
IC791	8-759-426-83	IC TK11228BMCL			
		< COIL >			
L105	1-414-398-11	INDUCTOR	10uH		
L770	1-414-398-11	INDUCTOR	10uH		
L773	1-414-398-11	INDUCTOR	10uH		
L774	1-414-398-11	INDUCTOR	10uH		
L776	1-414-398-11	INDUCTOR	10uH		
L779	1-410-737-31	INDUCTOR CHIP	0.47uH		
L781	1-412-963-11	INDUCTOR	100uH		
L782	1-412-963-11	INDUCTOR	100uH		
L783	1-414-398-11	INDUCTOR	10uH		
L784	1-414-398-11	INDUCTOR	10uH		
L789	1-414-398-11	INDUCTOR	10uH		
		< TRANSISTOR >			
Q105	8-729-037-52	TRANSISTOR 2SD2216J-QR(TX).SO			
Q109	8-729-037-52	TRANSISTOR 2SD2216J-QR(TX).SO			
Q701	8-729-013-04	TRANSISTOR 2SC4851-TL			
Q702	8-729-013-04	TRANSISTOR 2SC4851-TL			
Q772	8-729-037-72	TRANSISTOR UN9211J-(TX).SO			
Q773	8-729-141-48	TRANSISTOR 2SB624-T1BV4			
Q774	8-729-141-48	TRANSISTOR 2SB624-T1BV4			
Q775	8-729-037-72	TRANSISTOR UN9211J-(TX).SO			
Q776	8-729-037-52	TRANSISTOR 2SD2216J-QR(TX).SO			
Q777	8-729-037-52	TRANSISTOR 2SD2216J-QR(TX).SO			
Q778	8-729-037-52	TRANSISTOR 2SD2216J-QR(TX).SO			
Q779	8-729-037-52	TRANSISTOR 2SD2216J-QR(TX).SO			
Q784	8-729-037-53	TRANSISTOR 2SB1462J-QR(TX).SO			
		< RESISTOR >			
R117	1-216-807-11	METAL CHIP	68	5%	1/16W
R118	1-216-833-11	METAL CHIP	10K	5%	1/16W
R120	1-216-864-11	METAL CHIP	0	5%	1/16W
R121	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R122	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R123	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
R124	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R137	1-216-807-11	METAL CHIP	68	5%	1/16W
R138	1-216-833-11	METAL CHIP	10K	5%	1/16W
R143	1-216-833-11	METAL CHIP	10K	5%	1/16W
R144	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R147	1-216-864-11	METAL CHIP	0	5%	1/16W
R206	1-216-821-11	METAL CHIP	1K	5%	1/16W
R308	1-216-821-11	METAL CHIP	1K	5%	1/16W
R309	1-216-821-11	METAL CHIP	1K	5%	1/16W
R310	1-216-821-11	METAL CHIP	1K	5%	1/16W
R311	1-216-821-11	METAL CHIP	1K	5%	1/16W
R312	1-216-821-11	METAL CHIP	1K	5%	1/16W
R313	1-216-821-11	METAL CHIP	1K	5%	1/16W
R314	1-216-821-11	METAL CHIP	1K	5%	1/16W
R315	1-216-864-11	METAL CHIP	0	5%	1/16W
R316	1-216-833-11	METAL CHIP	10K	5%	1/16W
R701	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R702	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R703	1-216-809-11	METAL CHIP	100	5%	1/16W
R704	1-216-810-11	METAL CHIP	120	5%	1/16W
R705	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R706	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R707	1-216-809-11	METAL CHIP	100	5%	1/16W
R708	1-216-810-11	METAL CHIP	120	5%	1/16W
R770	1-216-845-11	METAL CHIP	100K	5%	1/16W
R772	1-216-296-91	SHORT	0		
R774	1-216-841-11	METAL CHIP	47K	5%	1/16W
R776	1-216-818-11	METAL CHIP	560	5%	1/16W
R779	1-216-847-11	METAL CHIP	150K	5%	1/16W
R780	1-216-837-11	METAL CHIP	22K	5%	1/16W
R782	1-216-833-11	METAL CHIP	10K	5%	1/16W
R783	1-216-833-11	METAL CHIP	10K	5%	1/16W
R786	1-216-817-11	METAL CHIP	470	5%	1/16W
R787	1-202-924-11	RES,CHIP	240	5%	1/16W
R788	1-202-924-11	RES,CHIP	240	5%	1/16W
R789	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R790	1-216-841-11	METAL CHIP	47K	5%	1/16W
R791	1-216-815-11	METAL CHIP	330	5%	1/16W
R792	1-216-814-11	METAL CHIP	270	5%	1/16W
R793	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R794	1-216-816-11	METAL CHIP	390	5%	1/16W
R796	1-216-809-11	METAL CHIP	100	5%	1/16W
R797	1-216-827-11	METAL CHIP	3.3K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R798	1-216-815-11	METAL CHIP	330	5%	1/16W
R799	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R800	1-216-833-11	METAL CHIP	10K	5%	1/16W
R801	1-216-833-11	METAL CHIP	10K	5%	1/16W
R802	1-216-841-11	METAL CHIP	47K	5%	1/16W
R804	1-216-839-11	METAL CHIP	33K	5%	1/16W
R806	1-216-821-11	METAL CHIP	1K	5%	1/16W
R808	1-216-821-11	METAL CHIP	1K	5%	1/16W
R810	1-216-837-11	METAL CHIP	22K	5%	1/16W
R812	1-216-837-11	METAL CHIP	22K	5%	1/16W
R814	1-216-853-11	METAL CHIP	470K	5%	1/16W
R815	1-216-853-11	METAL CHIP	470K	5%	1/16W
R818	1-216-837-11	METAL CHIP	22K	5%	1/16W
R819	1-216-839-11	METAL CHIP	33K	5%	1/16W
R820	1-216-803-11	METAL CHIP	33	5%	1/16W
R822	1-216-834-11	METAL CHIP	12K	5%	1/16W
R824	1-216-821-11	METAL CHIP	1K	5%	1/16W
R825	1-216-841-11	METAL CHIP	47K	5%	1/16W
R826	1-216-839-11	METAL CHIP	33K	5%	1/16W
R827	1-216-821-11	METAL CHIP	1K	5%	1/16W
R830	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R832	1-216-807-11	METAL CHIP	68	5%	1/16W
R843	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R844	1-216-837-11	METAL CHIP	22K	5%	1/16W
R849	1-218-837-11	RES,CHIP	390	0.50%	1/16W
R850	1-218-835-11	RES,CHIP	330	0.50%	1/16W
R851	1-218-835-11	RES,CHIP	330	0.50%	1/16W
R852	1-218-837-11	RES,CHIP	390	0.50%	1/16W
R858	1-216-816-11	METAL CHIP	390	5%	1/16W

* A-7073-778-A RS-80 BOARD, COMPLETE (DSR-40)
* A-7073-781-A RS-80 BOARD, COMPLETE (DSR-40P)
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(Ref.No. 3,000 Series)

< CAPACITOR >

C001	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C002	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C003	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C004	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C005	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C006	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C007	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C008	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C009	1-124-778-00	ELECT CHIP	22uF	20%	6.3V

< CONNECTOR >

CN001	1-770-693-11	CONNECTOR, FFC/FPC 10P
CN002	1-573-005-21	CONNECTOR, D-SUB 9P (REMOTE RS-422A)

< DIODE >

D001	8-719-062-19	DIODE MA3200WA-TX
D002	8-719-062-19	DIODE MA3200WA-TX
D003	8-719-062-19	DIODE MA3200WA-TX
D004	8-719-062-19	DIODE MA3200WA-TX
D005	8-719-062-19	DIODE MA3200WA-TX
D006	8-719-421-71	DIODE MA132WA-TX
D007	8-719-421-71	DIODE MA132WA-TX

Ref. No.	Part No.	Description			Remark
		< FERRITE BEAD >			
FB001	1-500-241-22	FERRITE	0UH		
FB002	1-500-241-22	FERRITE	0UH		
FB003	1-500-241-22	FERRITE	0UH		
FB004	1-500-241-22	FERRITE	0UH		
FB005	1-500-241-22	FERRITE	0UH		
FB006	1-500-241-22	FERRITE	0UH		
		< IC >			
IC001	8-759-583-67	IC HD6473837UX-GDX2050			
IC002	8-759-096-87	IC TC7WU04FU(TE12R)			
IC003	8-759-289-43	IC LTC490CS8-E2			
		< COIL >			
L001	1-412-029-11	INDUCTOR CHIP	10uH		
		< RESISTOR >			
R001	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R002	1-216-801-11	METAL CHIP	22	5%	1/16W
R003	1-216-815-11	METAL CHIP	330	5%	1/16W
R004	1-216-815-11	METAL CHIP	330	5%	1/16W
R005	1-216-815-11	METAL CHIP	330	5%	1/16W
R006	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R007	1-216-857-11	METAL CHIP	1M	5%	1/16W
R008	1-216-801-11	METAL CHIP	22	5%	1/16W
R009	1-216-801-11	METAL CHIP	22	5%	1/16W
R010	1-216-833-11	METAL CHIP	10K	5%	1/16W (DSR-40)
R011	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R012	1-216-801-11	METAL CHIP	22	5%	1/16W
R013	1-216-857-11	METAL CHIP	1M	5%	1/16W
R014	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R015	1-216-833-11	METAL CHIP	10K	5%	1/16W
R016	1-216-833-11	METAL CHIP	10K	5%	1/16W
R018	1-216-864-11	METAL CHIP	0	5%	1/16W
		< VIBRATOR >			
X001	1-579-125-11	VIBRATOR, CERAMIC (8MHz)			
X002	1-567-870-11	OSCILLATOR, CERAMIC (614kHz)			

* A-7067-206-A VA-106 BOARD, COMPLETE (DSR-40)
* A-7067-208-A VA-106 BOARD, COMPLETE (DSR-40P)
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(Ref.No. 10,000 Series)

< CAPACITOR >

C001	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C002	1-162-927-11	CERAMIC CHIP	100PF	5%	50V (DSR-40)
C002	1-162-926-11	CERAMIC CHIP	82PF	5%	50V (DSR-40P)
C003	1-162-928-11	CERAMIC CHIP	120PF	5%	50V (DSR-40)
C003	1-162-927-11	CERAMIC CHIP	100PF	5%	50V (DSR-40P)
C004	1-162-927-11	CERAMIC CHIP	100PF	5%	50V (DSR-40)

VA-106

Ref. No.	Part No.	Description			Remark
C004	1-162-926-11	CERAMIC CHIP	82PF	5%	50V (DSR-40P)
C005	1-162-919-11	CERAMIC CHIP	22PF	5%	50V (DSR-40)
C005	1-162-918-11	CERAMIC CHIP	18PF	5%	50V (DSR-40P)
C006	1-164-816-11	CERAMIC CHIP	220PF	2%	50V (DSR-40)
C006	1-164-218-11	CERAMIC CHIP	180PF	0.25PF	50V (DSR-40P)
C007	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C008	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C009	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C010	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C011	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C012	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C013	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C014	1-164-670-11	CERAMIC CHIP	1200PF	5%	16V (DSR-40)
C014	1-164-218-11	CERAMIC CHIP	180PF	0.25PF	50V (DSR-40P)
C101	1-128-004-11	ELECT CHIP	10uF	20%	16V
C102	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C103	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C104	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C105	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C106	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C107	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C108	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C109	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C201	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C202	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C203	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C204	1-128-003-11	ELECT CHIP	22uF	20%	4V
C205	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C206	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C207	1-164-378-11	CERAMIC CHIP	30PF	5%	50V (DSR-40)
C207	1-162-920-11	CERAMIC CHIP	27PF	5%	50V (DSR-40P)
C208	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C209	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C210	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C211	1-162-958-11	CERAMIC CHIP	270PF	5%	50V
C212	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C213	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C214	1-162-917-11	CERAMIC CHIP	15PF	5%	50V (DSR-40)
C214	1-162-916-11	CERAMIC CHIP	12PF	5%	50V (DSR-40P)
C215	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C216	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C217	1-128-003-11	ELECT CHIP	22uF	20%	4V
C218	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C219	1-128-003-11	ELECT CHIP	22uF	20%	4V
C220	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C221	1-128-003-11	ELECT CHIP	22uF	20%	4V
C222	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C223	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C224	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C225	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remark
C226	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C227	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C229	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C230	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C231	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C232	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C233	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C234	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C235	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C237	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C238	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C239	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C240	1-128-004-11	ELECT CHIP	10uF	20%	16V
C241	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C242	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C243	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C244	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C245	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C246	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C247	1-128-004-11	ELECT CHIP	10uF	20%	16V
C248	1-128-003-11	ELECT CHIP	22uF	20%	4V
C249	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C250	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C251	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C252	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C253	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C254	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C255	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C256	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C257	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C258	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C259	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C260	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C261	1-128-006-11	ELECT CHIP	4.7uF	20%	25V
C262	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C263	1-162-911-11	CERAMIC CHIP	6PF	0.5PF	50V (DSR-40)
C263	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V (DSR-40P)
C264	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C265	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C266	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C267	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C268	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C269	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C270	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C271	1-128-003-11	ELECT CHIP	22uF	20%	4V
C272	1-164-378-11	CERAMIC CHIP	30PF	5%	50V (DSR-40)
C272	1-162-920-11	CERAMIC CHIP	27PF	5%	50V (DSR-40P)
C273	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C274	1-162-917-11	CERAMIC CHIP	15PF	5%	50V (DSR-40)
C274	1-162-916-11	CERAMIC CHIP	12PF	5%	50V (DSR-40P)
C275	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C276	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C277	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C278	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C279	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V

Ref. No.	Part No.	Description			Remark
C281	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C282	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C283	1-115-156-11	CERAMIC CHIP	1uF		10V
C284	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C286	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C287	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C288	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C289	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C290	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C291	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C292	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C293	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C294	1-128-006-11	ELECT CHIP	4.7uF	20%	25V
C295	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C296	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C297	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C298	1-128-006-11	ELECT CHIP	4.7uF	20%	25V
C299	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C300	1-162-911-11	CERAMIC CHIP	6PF	0.5PF	50V
C301	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (DSR-40)
C301	1-164-739-11	CERAMIC CHIP	560PF	5%	50V (DSR-40P)
C302	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C304	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C305	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C306	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C307	1-128-003-11	ELECT CHIP	22uF	20%	4V
C308	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C309	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C310	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C311	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C312	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C313	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (DSR-40P)
C314	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C315	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C316	1-128-003-11	ELECT CHIP	22uF	20%	4V
C317	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C318	1-164-360-11	CERAMIC CHIP	0.1uF		16V (DSR-40P)
C319	1-162-927-11	CERAMIC CHIP	100PF	5%	50V (DSR-40P)
C320	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C321	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C322	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C323	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C324	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C325	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C326	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C327	1-164-360-11	CERAMIC CHIP	0.1uF		16V (DSR-40P)
C328	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C329	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C330	1-128-004-11	ELECT CHIP	10uF	20%	16V (DSR-40P)
C331	1-164-360-11	CERAMIC CHIP	0.1uF		16V (DSR-40P)
C332	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C338	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C339	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C340	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C341	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C343	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C344	1-162-926-11	CERAMIC CHIP	82PF	5%	50V
C345	1-162-926-11	CERAMIC CHIP	82PF	5%	50V
C401	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C402	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C403	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C404	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C405	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C406	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C407	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C408	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C409	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C410	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C412	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C414	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C416	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C417	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C418	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C419	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C420	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C421	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C422	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C423	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C424	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C425	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C426	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C427	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C428	1-113-619-11	CERAMIC CHIP	0.47uF		10V
C429	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C430	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C431	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C432	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C433	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C434	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C435	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C436	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C437	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C438	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C439	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C440	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C441	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C442	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C443	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C444	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C445	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C446	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C447	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C448	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C449	1-164-156-11	CERAMIC CHIP	0.1uF		25V (DSR-40P)
C450	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C451	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C452	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C453	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C454	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C455	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C456	1-164-360-11	CERAMIC CHIP	0.1uF		16V

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Ref. No.	Part No.	Description			Remark
C457	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C458	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C459	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C460	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C461	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C462	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C463	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C464	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C465	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C466	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C467	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C468	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C469	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C470	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C471	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C472	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C473	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C474	1-128-007-11	ELECT CHIP	2.2uF	20%	35V
C475	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C476	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C477	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C478	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C479	1-117-720-11	CERAMIC CHIP	4.7uF		10V (DSR-40P)
C480	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C481	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C482	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C483	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C484	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C485	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C486	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C487	1-124-779-00	ELECT CHIP	10uF	20%	16V
C488	1-115-156-11	CERAMIC CHIP	1uF		10V
C489	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C490	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C491	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C492	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C493	1-124-779-00	ELECT CHIP	10uF	20%	16V
C494	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C495	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C496	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C497	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C498	1-124-779-00	ELECT CHIP	10uF	20%	16V
C499	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C501	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C502	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C503	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C504	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C505	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C506	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C507	1-162-908-11	CERAMIC CHIP	3PF	0.5PF	50V
C508	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C509	1-162-922-11	CERAMIC CHIP	39PF	5%	50V
C510	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C511	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C512	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C513	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C514	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C515	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C516	1-128-004-11	ELECT CHIP	10uF	20%	16V
C517	1-128-003-11	ELECT CHIP	22uF	20%	4V
C518	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C519	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C520	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C521	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C522	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C523	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C524	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C525	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C526	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C527	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C528	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C529	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C530	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C531	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C532	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C533	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C534	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C535	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C536	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C537	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C538	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C539	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C540	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C541	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C542	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C543	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C544	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C545	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C601	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C602	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C603	1-128-004-11	ELECT CHIP	10uF	20%	16V
C604	1-115-156-11	CERAMIC CHIP	1uF		10V
C606	1-128-004-11	ELECT CHIP	10uF	20%	16V
C608	1-128-004-11	ELECT CHIP	10uF	20%	16V
C612	1-162-920-11	CERAMIC CHIP	27PF	5%	50V (DSR-40)
C612	1-162-921-11	CERAMIC CHIP	33PF	5%	50V (DSR-40P)
C613	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C614	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C615	1-162-917-11	CERAMIC CHIP	15PF	5%	50V (DSR-40)
C616	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C618	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C619	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C621	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C624	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C628	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C629	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C630	1-128-004-11	ELECT CHIP	10uF	20%	16V
C631	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C651	1-128-003-11	ELECT CHIP	22uF	20%	4V
C652	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C653	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C654	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C655	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C656	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C657	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C658	1-164-360-11	CERAMIC CHIP	0.1uF		16V

Ref. No.	Part No.	Description			Remark
C659	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C660	1-128-007-11	ELECT CHIP	2.2uF	20%	35V
C661	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C662	1-162-908-11	CERAMIC CHIP	3PF	0.5PF	50V
C663	1-162-922-11	CERAMIC CHIP	39PF	5%	50V
C664	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C665	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C667	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C668	1-115-156-11	CERAMIC CHIP	1uF		10V
C669	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C670	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C671	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C672	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C673	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C674	1-128-003-11	ELECT CHIP	22uF	20%	4V
C675	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C676	1-128-003-11	ELECT CHIP	22uF	20%	4V
C677	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C678	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C679	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C680	1-117-720-11	CERAMIC CHIP	4.7uF		10V
C681	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C682	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C851	1-126-393-11	ELECT CHIP	33uF	20%	10V
C852	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C853	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C854	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C855	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C856	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C857	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C858	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C859	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C860	1-128-013-11	ELECT CHIP	1uF	20%	50V
C861	1-128-013-11	ELECT CHIP	1uF	20%	50V
C862	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C863	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C864	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C865	1-126-204-11	ELECT CHIP	47uF	20%	16V
C866	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C867	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C868	1-126-400-11	ELECT	22uF	20%	35V
C869	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C870	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C871	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C872	1-126-204-11	ELECT CHIP	47uF	20%	16V
C873	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C874	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C875	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C876	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C877	1-126-197-11	ELECT CHIP	10uF	20%	50V
C878	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C879	1-162-975-11	CERAMIC CHIP	24PF	5%	50V
C881	1-126-204-11	ELECT CHIP	47uF	20%	16V
C882	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C883	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C884	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C885	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C886	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C887	1-104-905-11	CAPACITOR	0.22F		5.5V
C888	1-126-927-11	ELECT	1000uF	20%	6.3V

Ref. No.	Part No.	Description			Remark
C889	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C891	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C892	1-128-004-11	ELECT CHIP	10uF	20%	16V
C893	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C894	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C895	1-126-392-11	ELECT CHIP	100uF	20%	6.3V
C896	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C897	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C898	1-126-392-11	ELECT CHIP	100uF	20%	6.3V
C899	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C900	1-126-396-11	ELECT CHIP	47uF	20%	16V
C901	1-126-396-11	ELECT CHIP	47uF	20%	16V
C902	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C903	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C904	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C906	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C907	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C908	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C1121	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1125	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1126	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1128	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
		< CONNECTOR >			
CN001	1-774-770-11	CONNECTOR, FFC/FPC 30P			
CN101	1-774-770-11	CONNECTOR, FFC/FPC 30P			
CN102	1-774-770-11	CONNECTOR, FFC/FPC 30P			
CN401	1-784-225-11	CONNECTOR, FFC/FPC 26P			
* CN601	1-564-005-11	PIN, CONNECTOR 6P			
CN602	1-779-369-11	CONNECTOR, SQUARE TYPE(INDI)4P			(DV IN/OUT)
CN851	1-774-770-11	CONNECTOR, FFC/FPC 30P			
CN852	1-770-305-11	CONNECTOR, FFC/FPC 10P			
* CN855	1-568-788-21	PIN, CONNECTOR 11P			
CN856	1-779-344-11	CONNECTOR, FFC/FPC 20P			
		< TRIMMER >			
CT201	1-141-424-11	CAP, ADJ (DECODER FREERUN)			
		< DIODE >			
D201	8-719-073-01	DIODE MA111-(K8).S0			
D202	8-719-073-01	DIODE MA111-(K8).S0			
D401	8-719-073-01	DIODE MA111-(K8).S0			
D402	8-719-073-01	DIODE MA111-(K8).S0			
D403	8-719-002-81	DIODE 1T363-01-T8A			
D404	8-719-073-01	DIODE MA111-(K8).S0			
D405	8-719-073-01	DIODE MA111-(K8).S0			
D406	8-719-073-01	DIODE MA111-(K8).S0			
D407	8-719-073-01	DIODE MA111-(K8).S0			
D408	8-719-073-01	DIODE MA111-(K8).S0			
D651	8-719-002-81	DIODE 1T363-01-T8A			
D851	8-719-421-59	DIODE MA3075WA-(TX)			
D852	8-719-400-71	DIODE MA3082-TX			
D854	8-719-073-01	DIODE MA111-(K8).S0			
D855	8-719-421-51	DIODE MA738-TX			
D856	8-719-073-28	DIODE MA729-(K8).S0			
D857	8-719-073-02	DIODE MA728-(K8).S0			
D858	8-719-421-51	DIODE MA738-TX			
D859	8-719-073-01	DIODE MA111-(K8).S0			
D860	8-719-073-01	DIODE MA111-(K8).S0			

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Ref. No.	Part No.	Description	Remark
D862	8-719-400-56	DIODE MA3062H-TX	
D863	8-719-421-59	DIODE MA3075WA-(TX)	
		< DELAY LINE >	
DL201	1-411-661-11	LINE, LC DELAY	
DL202	1-415-551-11	DELAY LINE 140NS	
DL401	1-415-551-11	DELAY LINE 140NS	
DL402	1-415-551-11	DELAY LINE 140NS	
DL403	1-415-551-11	DELAY LINE 140NS	
		< FERRITE BEAD >	
FB401	1-414-445-11	FERRITE 0UH	
FB402	1-414-445-11	FERRITE 0UH	
FB403	1-414-445-11	FERRITE 0UH	
FB404	1-414-445-11	FERRITE 0UH	
FB405	1-414-445-11	FERRITE 0UH	
FB406	1-414-445-11	FERRITE 0UH	
FB407	1-414-445-11	FERRITE 0UH	
FB408	1-414-445-11	FERRITE 0UH	
FB409	1-414-445-11	FERRITE 0UH	
FB410	1-414-445-11	FERRITE 0UH	
FB411	1-414-445-11	FERRITE 0UH	
FB412	1-414-445-11	FERRITE 0UH	
FB651	1-414-445-11	FERRITE 0UH	
FB652	1-414-445-11	FERRITE 0UH	
FB851	1-543-948-22	FERRITE 0UH	
FB852	1-543-948-22	FERRITE 0UH	
FB853	1-543-948-22	FERRITE 0UH	
		< FILTER >	
FL201	1-236-925-11	FILTER, LOW PASS	
FL202	1-236-926-11	FILTER, BAND PASS (DSR-40)	
FL202	1-239-153-11	FILTER, BAND PASS (DSR-40P)	
FL203	1-233-501-11	FILTER, LOW PASS	
FL204	1-233-500-11	FILTER, LOW PASS	
FL205	1-233-501-11	FILTER, LOW PASS	
FL401	1-235-786-11	FILTER, LOW PASS (3MHz) (DSR-40)	
FL401	1-235-584-11	FILTER, LOW PASS (DSR-40P)	
FL402	1-235-584-11	FILTER, LOW PASS	
FL403	1-235-161-00	FILTER, BAND PASS (DSR-40)	
FL403	1-235-181-00	FILTER, BAND PASS (DSR-40P)	
		< IC >	
IC001	8-759-446-66	IC MM1113XFBE	
IC002	8-759-446-66	IC MM1113XFBE	
IC101	8-759-523-81	IC TC74VHC08FT(EL)	
IC102	8-759-327-60	IC TC7W125FU-TE12R	
IC103	8-759-524-04	IC TC74VHC125FT(EL)	
IC104	8-759-491-47	IC TC74VHCT08AFT(EL)	
IC105	8-759-491-47	IC TC74VHCT08AFT(EL)	
IC106	8-759-491-47	IC TC74VHCT08AFT(EL)	
IC201	8-759-337-26	IC MM1115XFBE	
IC202	8-759-433-44	IC MM1031XML	
IC203	8-759-337-26	IC MM1115XFBE	
IC204	8-759-498-27	IC TK16074MTL	
IC205	8-759-432-78	IC MM1111XFBE	
IC206	8-752-054-80	IC CXA1521M-T4	
IC207	8-759-498-27	IC TK16074MTL	
IC208	8-752-054-80	IC CXA1521M-T4	
IC209	8-759-449-58	IC LM7131BCM5X	

Ref. No.	Part No.	Description	Remark
IC210	8-759-711-62	IC NJM2240M(TE2)	
IC211	8-752-352-20	IC CXD2023Q (DSR-40)	
IC211	8-752-372-78	IC CXD2024AQ-TL (DSR-40P)	
IC212	8-759-498-27	IC TK16074MTL	
IC213	8-759-603-54	IC M51271FP-70AD	
IC214	8-752-054-80	IC CXA1521M-T4	
IC215	8-759-449-58	IC LM7131BCM5X	
IC216	8-759-239-58	IC TC74HC221AF(EL) (DSR-40P)	
IC217	8-759-324-99	IC MM1118XFBE	
IC218	8-759-449-58	IC LM7131BCM5X	
IC219	8-759-058-54	IC TC7S00FU(TE85R) (DSR-40P)	
IC401	8-759-449-58	IC LM7131BCM5X	
IC402	8-759-498-27	IC TK16074MTL	
IC403	8-759-498-27	IC TK16074MTL	
IC404	8-759-337-26	IC MM1115XFBE	
IC405	8-759-432-78	IC MM1111XFBE	
IC406	8-759-432-78	IC MM1111XFBE	
IC407	8-752-054-80	IC CXA1521M-T4	
IC408	8-752-052-73	IC CXA1451M-T4	
IC409	8-752-052-73	IC CXA1451M-T4	
IC410	8-752-052-73	IC CXA1451M-T4	
IC411	8-752-054-80	IC CXA1521M-T4	
IC412	8-759-449-58	IC LM7131BCM5X	
IC413	8-759-449-58	IC LM7131BCM5X	
IC414	8-759-449-58	IC LM7131BCM5X	
IC415	8-752-052-73	IC CXA1451M-T4	
IC416	8-752-054-80	IC CXA1521M-T4 (DSR-40P)	
IC417	8-752-052-73	IC CXA1451M-T4	
IC418	8-759-449-58	IC LM7131BCM5X	
IC419	8-752-052-73	IC CXA1451M-T4	
IC420	8-752-053-21	IC CXA1211M-T4	
IC421	8-759-449-58	IC LM7131BCM5X	
IC422	8-759-603-56	IC M51272FP-TE2	
IC423	8-759-164-09	IC LA7218M-TE-R	
IC424	8-759-031-84	IC TC7S04F(TE85R)	
IC425	8-759-483-56	IC MB90089PF-G-196-BND-ER	
IC426	8-759-449-58	IC LM7131BCM5X	
IC427	8-752-054-80	IC CXA1521M-T4	
IC428	8-752-054-80	IC CXA1521M-T4	
IC429	8-752-054-80	IC CXA1521M-T4	
IC430	8-759-449-58	IC LM7131BCM5X	
IC602	8-759-349-01	IC MC68HC68VBIFB	
IC651	8-759-368-82	IC MB90089PF-G-155-BND-ER	
IC652	8-759-164-09	IC LA7218M-TE-R	
IC653	8-759-337-26	IC MM1115XFBE	
IC654	8-752-052-73	IC CXA1451M-T4	
IC851	8-759-356-27	IC NJM2129M-TE2	
IC853	8-759-363-18	IC TC7ST04FU(TE85R)	
IC854	8-759-570-40	IC S579191PJ	
IC855	8-759-523-02	IC TC74HC4053AFT(EL)	
IC856	8-759-445-93	IC AK6440AM-E2	
IC857	1-473-301-11	IC CONVERTER UNIT, DC/DC	
IC858	8-759-538-14	IC S-3513BEFS-TB	
IC859	8-759-248-87	IC MM1256XF-BE	
IC860	8-759-536-72	IC TL1596CPWR	
IC861	8-759-822-95	IC L79M05T-FA-TL	
IC862	8-759-157-22	IC PQ05TZ1U	
IC1105	8-759-635-27	IC M62352GP-75ED	
IC1110	8-759-635-27	IC M62352GP-75ED	
IC1114	8-759-635-27	IC M62352GP-75ED	

Ref. No.	Part No.	Description	Remark
IC1115	8-759-234-20	IC TC7S08F(TE85R)	
IC1116	8-759-234-20	IC TC7S08F(TE85R)	
		< JACK >	
J851	1-573-798-11	JACK, MINIATURE (DIA. 3.5) (CONTROL S)	
J852	1-691-258-21	JACK (LANC)	
		< COIL >	
L001	1-412-955-11	INDUCTOR 22uH (DSR-40)	
L001	1-410-384-31	INDUCTOR CHIP 18uH (DSR-40P)	
L002	1-412-955-11	INDUCTOR 22uH (DSR-40)	
L002	1-410-384-31	INDUCTOR CHIP 18uH (DSR-40P)	
L003	1-412-963-11	INDUCTOR 100uH (DSR-40)	
L003	1-410-392-11	INDUCTOR CHIP 82uH (DSR-40P)	
L004	1-414-398-11	INDUCTOR 10uH (DSR-40)	
L004	1-410-380-31	INDUCTOR CHIP 8.2uH (DSR-40P)	
L201	1-412-029-11	INDUCTOR CHIP 10uH	
L202	1-412-953-11	INDUCTOR 15uH (DSR-40)	
L202	1-412-952-11	INDUCTOR 12uH (DSR-40P)	
L203	1-410-381-11	INDUCTOR CHIP 10uH	
L204	1-412-950-11	INDUCTOR 8.2uH (DSR-40)	
L204	1-412-949-21	INDUCTOR 6.8uH (DSR-40P)	
L205	1-412-029-11	INDUCTOR CHIP 10uH	
L206	1-412-029-11	INDUCTOR CHIP 10uH	
L207	1-412-029-11	INDUCTOR CHIP 10uH	
L208	1-412-029-11	INDUCTOR CHIP 10uH	
L209	1-410-381-11	INDUCTOR CHIP 10uH	
L210	1-412-953-11	INDUCTOR 15uH (DSR-40)	
L210	1-412-952-11	INDUCTOR 12uH (DSR-40P)	
L211	1-412-950-11	INDUCTOR 8.2uH (DSR-40)	
L211	1-412-949-21	INDUCTOR 6.8uH (DSR-40P)	
L212	1-412-808-21	INDUCTOR 470uH	
L214	1-412-031-11	INDUCTOR CHIP 47uH	
L215	1-412-029-11	INDUCTOR CHIP 10uH	
L216	1-412-029-11	INDUCTOR CHIP 10uH	
L217	1-412-029-11	INDUCTOR CHIP 10uH	
L218	1-412-029-11	INDUCTOR CHIP 10uH	
L219	1-412-029-11	INDUCTOR CHIP 10uH (DSR-40P)	
L401	1-412-029-11	INDUCTOR CHIP 10uH	
L402	1-412-029-11	INDUCTOR CHIP 10uH	
L403	1-412-029-11	INDUCTOR CHIP 10uH	
L404	1-412-029-11	INDUCTOR CHIP 10uH	
L405	1-412-030-11	INDUCTOR CHIP 22uH	
L406	1-412-026-11	INDUCTOR CHIP 1uH	
L407	1-412-034-11	INDUCTOR CHIP 330uH	
L408	1-410-385-11	INDUCTOR CHIP 22uH	
L409	1-412-029-11	INDUCTOR CHIP 10uH	
L410	1-412-029-11	INDUCTOR CHIP 10uH	
L411	1-412-029-11	INDUCTOR CHIP 10uH	
L412	1-412-029-11	INDUCTOR CHIP 10uH	
L413	1-412-029-11	INDUCTOR CHIP 10uH	
L601	1-412-029-11	INDUCTOR CHIP 10uH	
L602	1-410-389-31	INDUCTOR CHIP 47uH (DSR-40)	
L602	1-410-388-31	INDUCTOR CHIP 39uH (DSR-40P)	
L603	1-412-029-11	INDUCTOR CHIP 10uH	
L604	1-412-029-11	INDUCTOR CHIP 10uH	
L651	1-410-385-11	INDUCTOR CHIP 22uH	
L652	1-410-385-11	INDUCTOR CHIP 22uH	
L653	1-412-029-11	INDUCTOR CHIP 10uH	
L654	1-412-026-11	INDUCTOR CHIP 1uH	
L655	1-410-385-11	INDUCTOR CHIP 22uH	
L656	1-412-029-11	INDUCTOR CHIP 10uH	
L851	1-412-026-11	INDUCTOR CHIP 1uH	
L852	1-412-026-11	INDUCTOR CHIP 1uH	
L853	1-412-031-11	INDUCTOR CHIP 47uH	
L854	1-412-029-11	INDUCTOR CHIP 10uH	
L857	1-412-029-11	INDUCTOR CHIP 10uH	
L858	1-412-029-11	INDUCTOR CHIP 10uH	
		< TRANSISTOR >	
Q001	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q002	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q003	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q004	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q101	8-729-015-76	TRANSISTOR UN5211-TX	
Q102	8-729-015-76	TRANSISTOR UN5211-TX	
Q103	8-729-015-76	TRANSISTOR UN5211-TX	
Q201	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q202	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q203	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q204	8-729-402-84	TRANSISTOR XN4601-TW	
Q205	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q206	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q207	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q208	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q209	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q210	8-729-427-83	TRANSISTOR XP6501-TXE	
Q211	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q212	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q213	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q214	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q215	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q216	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q217	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q218	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q219	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q220	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q221	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q222	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q223	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q224	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q225	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q226	8-729-402-84	TRANSISTOR XN4601-TW	
Q227	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q228	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q229	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q230	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q231	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q232	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q233	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q234	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q235	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q236	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q401	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q402	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q403	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q404	8-729-402-84	TRANSISTOR XN4601-TW	
Q405	8-729-402-84	TRANSISTOR XN4601-TW	
Q406	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q407	8-729-905-35	TRANSISTOR 2SC4081T106R	

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Ref. No.	Part No.	Description	Remark
Q408	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q409	8-729-202-38	TRANSISTOR 2SC3326N-TE85L-AB	
Q410	8-729-202-38	TRANSISTOR 2SC3326N-TE85L-AB	
Q411	8-729-202-38	TRANSISTOR 2SC3326N-TE85L-AB	
Q412	8-729-402-84	TRANSISTOR XN4601-TW	
Q413	8-729-402-84	TRANSISTOR XN4601-TW	
Q414	8-729-402-84	TRANSISTOR XN4601-TW	
Q415	8-729-402-84	TRANSISTOR XN4601-TW	
Q416	8-729-402-84	TRANSISTOR XN4601-TW	
Q417	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q418	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q419	8-729-402-84	TRANSISTOR XN4601-TW	
Q420	8-729-402-84	TRANSISTOR XN4601-TW	
Q421	8-729-402-84	TRANSISTOR XN4601-TW	
Q422	8-729-402-84	TRANSISTOR XN4601-TW	
Q423	8-729-402-84	TRANSISTOR XN4601-TW	
Q424	8-729-402-84	TRANSISTOR XN4601-TW (DSR-40P)	
Q425	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q426	8-729-402-84	TRANSISTOR XN4601-TW	
Q427	8-729-402-42	TRANSISTOR UN5213-TX	
Q428	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q429	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q430	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q431	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q432	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q433	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q601	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q602	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q604	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q605	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q606	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q607	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q613	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q651	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q652	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q653	8-729-026-52	TRANSISTOR 2SA1576A-T106-R	
Q654	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q851	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q852	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q853	8-729-905-35	TRANSISTOR 2SC4081T106R	
Q854	8-729-402-42	TRANSISTOR UN5213-TX	
Q855	8-729-014-91	TRANSISTOR 2SD2185S-TX	

< RESISTOR >

Ref. No.	Part No.	Description			Remark
R001	1-216-839-11	METAL CHIP	33K	5%	1/16W
R002	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R003	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R004	1-216-821-11	METAL CHIP	1K	5%	1/16W
R005	1-216-821-11	METAL CHIP	1K	5%	1/16W
R006	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R007	1-216-821-11	METAL CHIP	1K	5%	1/16W
R008	1-216-821-11	METAL CHIP	1K	5%	1/16W
R009	1-216-813-11	METAL CHIP	220	5%	1/16W
R010	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R101	1-216-797-11	METAL CHIP	10	5%	1/16W
R102	1-216-797-11	METAL CHIP	10	5%	1/16W
R103	1-216-833-11	METAL CHIP	10K	5%	1/16W
R104	1-216-833-11	METAL CHIP	10K	5%	1/16W
R105	1-216-797-11	METAL CHIP	10	5%	1/16W
R106	1-216-797-11	METAL CHIP	10	5%	1/16W
R107	1-216-797-11	METAL CHIP	10	5%	1/16W
R108	1-216-833-11	METAL CHIP	10K	5%	1/16W
R109	1-216-797-11	METAL CHIP	10	5%	1/16W
R110	1-216-797-11	METAL CHIP	10	5%	1/16W
R112	1-216-833-11	METAL CHIP	10K	5%	1/16W
R113	1-216-864-11	METAL CHIP	0	5%	1/16W
R114	1-216-809-11	METAL CHIP	100	5%	1/16W
R115	1-216-809-11	METAL CHIP	100	5%	1/16W
R117	1-216-809-11	METAL CHIP	100	5%	1/16W
R118	1-216-797-11	METAL CHIP	10	5%	1/16W
R119	1-216-797-11	METAL CHIP	10	5%	1/16W (DSR-40P)
R120	1-216-809-11	METAL CHIP	100	5%	1/16W
R121	1-216-809-11	METAL CHIP	100	5%	1/16W
R122	1-216-809-11	METAL CHIP	100	5%	1/16W
R123	1-216-809-11	METAL CHIP	100	5%	1/16W
R124	1-216-809-11	METAL CHIP	100	5%	1/16W
R125	1-216-809-11	METAL CHIP	100	5%	1/16W
R126	1-216-809-11	METAL CHIP	100	5%	1/16W
R127	1-216-797-11	METAL CHIP	10	5%	1/16W
R128	1-216-809-11	METAL CHIP	100	5%	1/16W
R129	1-216-797-11	METAL CHIP	10	5%	1/16W
R130	1-216-809-11	METAL CHIP	100	5%	1/16W
R131	1-216-809-11	METAL CHIP	100	5%	1/16W
R132	1-216-797-11	METAL CHIP	10	5%	1/16W
R133	1-216-809-11	METAL CHIP	100	5%	1/16W
R135	1-216-809-11	METAL CHIP	100	5%	1/16W
R136	1-216-809-11	METAL CHIP	100	5%	1/16W
R137	1-216-809-11	METAL CHIP	100	5%	1/16W
R138	1-216-809-11	METAL CHIP	100	5%	1/16W
R139	1-216-809-11	METAL CHIP	100	5%	1/16W
R140	1-216-809-11	METAL CHIP	100	5%	1/16W
R141	1-216-809-11	METAL CHIP	100	5%	1/16W
R142	1-216-809-11	METAL CHIP	100	5%	1/16W
R143	1-216-809-11	METAL CHIP	100	5%	1/16W
R144	1-216-809-11	METAL CHIP	100	5%	1/16W
R145	1-216-809-11	METAL CHIP	100	5%	1/16W
R146	1-216-797-11	METAL CHIP	10	5%	1/16W
R147	1-216-797-11	METAL CHIP	10	5%	1/16W
R148	1-216-797-11	METAL CHIP	10	5%	1/16W
R152	1-216-833-11	METAL CHIP	10K	5%	1/16W
R153	1-216-833-11	METAL CHIP	10K	5%	1/16W
R154	1-216-833-11	METAL CHIP	10K	5%	1/16W
R156	1-216-809-11	METAL CHIP	100	5%	1/16W
R157	1-216-809-11	METAL CHIP	100	5%	1/16W
R158	1-216-809-11	METAL CHIP	100	5%	1/16W
R159	1-216-809-11	METAL CHIP	100	5%	1/16W
R160	1-216-809-11	METAL CHIP	100	5%	1/16W
R161	1-216-809-11	METAL CHIP	100	5%	1/16W
R162	1-216-809-11	METAL CHIP	100	5%	1/16W
R163	1-216-809-11	METAL CHIP	100	5%	1/16W
R164	1-216-809-11	METAL CHIP	100	5%	1/16W
R165	1-216-809-11	METAL CHIP	100	5%	1/16W
R167	1-216-809-11	METAL CHIP	100	5%	1/16W
R168	1-216-809-11	METAL CHIP	100	5%	1/16W
R169	1-216-809-11	METAL CHIP	100	5%	1/16W
R171	1-216-809-11	METAL CHIP	100	5%	1/16W
R172	1-216-809-11	METAL CHIP	100	5%	1/16W
R173	1-216-809-11	METAL CHIP	100	5%	1/16W
R174	1-216-809-11	METAL CHIP	100	5%	1/16W

Ref. No.	Part No.	Description			Remark
R175	1-216-809-11	METAL CHIP	100	5%	1/16W
R176	1-216-809-11	METAL CHIP	100	5%	1/16W
R177	1-216-809-11	METAL CHIP	100	5%	1/16W
R178	1-216-809-11	METAL CHIP	100	5%	1/16W
R179	1-216-809-11	METAL CHIP	100	5%	1/16W
R180	1-216-809-11	METAL CHIP	100	5%	1/16W
R181	1-216-809-11	METAL CHIP	100	5%	1/16W
R201	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R202	1-216-805-11	METAL CHIP	47	5%	1/16W
R203	1-216-821-11	METAL CHIP	1K	5%	1/16W
R204	1-216-837-11	METAL CHIP	22K	5%	1/16W
R205	1-216-839-11	METAL CHIP	33K	5%	1/16W
R206	1-216-821-11	METAL CHIP	1K	5%	1/16W
R207	1-216-810-11	METAL CHIP	120	5%	1/16W
R208	1-216-821-11	METAL CHIP	1K	5%	1/16W
R209	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R210	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R211	1-216-817-11	METAL CHIP	470	5%	1/16W
R212	1-216-837-11	METAL CHIP	22K	5%	1/16W
R213	1-216-833-11	METAL CHIP	10K	5%	1/16W
R214	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R215	1-216-821-11	METAL CHIP	1K	5%	1/16W
R216	1-216-821-11	METAL CHIP	1K	5%	1/16W
R217	1-218-877-11	RES,CHIP	18K	0.50%	1/16W
R218	1-216-838-11	METAL CHIP	27K	5%	1/16W
R219	1-216-821-11	METAL CHIP	1K	5%	1/16W
R220	1-216-837-11	METAL CHIP	22K	5%	1/16W
R221	1-216-834-11	METAL CHIP	12K	5%	1/16W
R222	1-216-821-11	METAL CHIP	1K	5%	1/16W
R223	1-216-817-11	METAL CHIP	470	5%	1/16W
R224	1-216-816-11	METAL CHIP	390	5%	1/16W
R225	1-216-821-11	METAL CHIP	1K	5%	1/16W
R226	1-216-807-11	METAL CHIP	68	5%	1/16W
R227	1-216-821-11	METAL CHIP	1K	5%	1/16W
R228	1-216-837-11	METAL CHIP	22K	5%	1/16W
R229	1-216-833-11	METAL CHIP	10K	5%	1/16W
R230	1-216-817-11	METAL CHIP	470	5%	1/16W
R231	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R232	1-216-821-11	METAL CHIP	1K	5%	1/16W
R233	1-216-837-11	METAL CHIP	22K	5%	1/16W
R234	1-216-837-11	METAL CHIP	22K	5%	1/16W
R235	1-216-841-11	METAL CHIP	47K	5%	1/16W
R236	1-216-833-11	METAL CHIP	10K	5%	1/16W
R237	1-216-817-11	METAL CHIP	470	5%	1/16W
R238	1-216-809-11	METAL CHIP	100	5%	1/16W
R239	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R240	1-216-833-11	METAL CHIP	10K	5%	1/16W
R241	1-216-821-11	METAL CHIP	1K	5%	1/16W
R242	1-216-809-11	METAL CHIP	100	5%	1/16W
R243	1-216-821-11	METAL CHIP	1K	5%	1/16W
R245	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R246	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R247	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R248	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R249	1-216-842-11	METAL CHIP	56K	5%	1/16W
R250	1-216-839-11	METAL CHIP	33K	5%	1/16W
R251	1-216-809-11	METAL CHIP	100	5%	1/16W
R252	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R253	1-216-837-11	METAL CHIP	22K	5%	1/16W
R254	1-216-845-11	METAL CHIP	100K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R255	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R256	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R257	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R258	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R259	1-218-841-11	RES,CHIP	560	0.50%	1/16W
R260	1-218-877-11	RES,CHIP	18K	0.50%	1/16W
R261	1-216-838-11	METAL CHIP	27K	5%	1/16W
R262	1-216-833-11	METAL CHIP	10K	5%	1/16W
R265	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R266	1-216-833-11	METAL CHIP	10K	5%	1/16W
R268	1-216-813-11	METAL CHIP	220	5%	1/16W
R269	1-218-841-11	RES,CHIP	560	0.50%	1/16W
R270	1-216-837-11	METAL CHIP	22K	5%	1/16W
R271	1-216-837-11	METAL CHIP	22K	5%	1/16W
R272	1-216-833-11	METAL CHIP	10K	5%	1/16W
R275	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
R276	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R277	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R278	1-216-833-11	METAL CHIP	10K	5%	1/16W
R279	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R280	1-216-837-11	METAL CHIP	22K	5%	1/16W
R281	1-216-813-11	METAL CHIP	220	5%	1/16W
R282	1-216-833-11	METAL CHIP	10K	5%	1/16W
R283	1-218-863-11	RES,CHIP	4.7K	0.50%	1/16W
R284	1-218-707-11	RES,CHIP	4.3K	5%	1/16W
R285	1-218-269-11	RES,CHIP	360	5%	1/16W
R286	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
R287	1-218-823-11	RES,CHIP	100	0.50%	1/16W
R288	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R289	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R290	1-216-842-11	METAL CHIP	56K	5%	1/16W
R291	1-216-839-11	METAL CHIP	33K	5%	1/16W
R292	1-216-837-11	METAL CHIP	22K	5%	1/16W
R293	1-216-849-11	METAL CHIP	220K	5%	1/16W
R294	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R295	1-216-821-11	METAL CHIP	1K	5%	1/16W
R296	1-216-809-11	METAL CHIP	100	5%	1/16W
R297	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R298	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R299	1-216-821-11	METAL CHIP	1K	5%	1/16W
R300	1-216-837-11	METAL CHIP	22K	5%	1/16W
R301	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R302	1-216-821-11	METAL CHIP	1K	5%	1/16W
R303	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R304	1-216-817-11	METAL CHIP	470	5%	1/16W
R305	1-218-843-11	RES,CHIP	680	0.50%	1/16W
R306	1-218-877-11	RES,CHIP	18K	0.50%	1/16W
R307	1-216-838-11	METAL CHIP	27K	5%	1/16W
R308	1-216-821-11	METAL CHIP	1K	5%	1/16W
R309	1-216-864-11	METAL CHIP	0	5%	1/16W
R310	1-218-885-11	RES,CHIP	39K	0.50%	1/16W
R312	1-218-867-11	RES,CHIP	6.8K	0.50%	1/16W
R313	1-216-817-11	METAL CHIP	470	5%	1/16W
R314	1-218-883-11	RES,CHIP	33K	0.50%	1/16W
R315	1-218-867-11	RES,CHIP	6.8K	0.50%	1/16W
R316	1-216-864-11	METAL CHIP	0	5%	1/16W
R318	1-216-837-11	METAL CHIP	22K	5%	1/16W

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Ref. No.	Part No.	Description			Remark
R319	1-216-837-11	METAL CHIP	22K	5%	1/16W
R320	1-218-879-11	RES,CHIP	22K	0.50%	1/16W
R321	1-216-844-11	METAL CHIP	82K	5%	1/16W
R322	1-216-824-11	METAL CHIP	1.8K	5%	1/16W
R323	1-218-869-11	RES,CHIP	8.2K	0.50%	1/16W
R324	1-216-833-11	METAL CHIP	10K	5%	1/16W
R325	1-216-817-11	METAL CHIP	470	5%	1/16W
R326	1-218-871-11	RES,CHIP	10K	0.50%	1/16W
R327	1-216-833-11	METAL CHIP	10K	5%	1/16W (DSR-40)
R328	1-216-821-11	METAL CHIP	1K	5%	1/16W
R329	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R330	1-216-853-11	METAL CHIP	470K	5%	1/16W
R331	1-216-833-11	METAL CHIP	10K	5%	1/16W
R332	1-218-843-11	RES,CHIP	680	0.50%	1/16W
R333	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R334	1-216-805-11	METAL CHIP	47	5%	1/16W (DSR-40)
R334	1-216-806-11	RES,CHIP	56	5%	1/16W (DSR-40P)
R335	1-216-815-11	METAL CHIP	330	5%	1/16W (DSR-40)
R335	1-216-809-11	METAL CHIP	100	5%	1/16W (DSR-40P)
R336	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R337	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R338	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40)
R339	1-216-837-11	METAL CHIP	22K	5%	1/16W
R340	1-216-842-11	METAL CHIP	56K	5%	1/16W
R341	1-216-839-11	METAL CHIP	33K	5%	1/16W
R342	1-216-837-11	METAL CHIP	22K	5%	1/16W
R343	1-216-837-11	METAL CHIP	22K	5%	1/16W
R344	1-216-837-11	METAL CHIP	22K	5%	1/16W
R345	1-216-845-11	METAL CHIP	100K	5%	1/16W
R346	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R347	1-216-837-11	METAL CHIP	22K	5%	1/16W
R348	1-218-841-11	RES,CHIP	560	0.50%	1/16W
R349	1-218-833-11	RES,CHIP	270	0.50%	1/16W
R350	1-218-851-11	RES,CHIP	1.5K	0.50%	1/16W
R351	1-216-821-11	METAL CHIP	1K	5%	1/16W
R352	1-216-840-11	METAL CHIP	39K	5%	1/16W (DSR-40P)
R353	1-218-841-11	RES,CHIP	560	0.50%	1/16W
R354	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R355	1-216-837-11	METAL CHIP	22K	5%	1/16W
R356	1-216-839-11	METAL CHIP	33K	5%	1/16W (DSR-40P)
R357	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R358	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R359	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R364	1-216-821-11	METAL CHIP	1K	5%	1/16W
R367	1-216-821-11	METAL CHIP	1K	5%	1/16W
R368	1-216-821-11	METAL CHIP	1K	5%	1/16W
R369	1-218-875-11	RES,CHIP	15K	0.50%	1/16W
R370	1-218-869-11	RES,CHIP	8.2K	0.50%	1/16W
R371	1-218-869-11	RES,CHIP	8.2K	0.50%	1/16W
R401	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R402	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R403	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R404	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R405	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R406	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R407	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R408	1-216-821-11	METAL CHIP	1K	5%	1/16W
R409	1-218-863-11	RES,CHIP	4.7K	0.50%	1/16W
R410	1-218-861-11	RES,CHIP	3.9K	0.50%	1/16W
R411	1-216-836-11	METAL CHIP	18K	5%	1/16W
R412	1-216-838-11	METAL CHIP	27K	5%	1/16W
R413	1-216-836-11	METAL CHIP	18K	5%	1/16W
R414	1-216-838-11	METAL CHIP	27K	5%	1/16W
R415	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R416	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R417	1-218-847-11	RES,CHIP	1K	0.50%	1/16W
R418	1-218-847-11	RES,CHIP	1K	0.50%	1/16W
R419	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R420	1-218-863-11	RES,CHIP	4.7K	0.50%	1/16W
R421	1-216-837-11	METAL CHIP	22K	5%	1/16W
R422	1-216-837-11	METAL CHIP	22K	5%	1/16W
R423	1-216-837-11	METAL CHIP	22K	5%	1/16W
R424	1-216-837-11	METAL CHIP	22K	5%	1/16W
R425	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R426	1-218-862-11	RES,CHIP	4.3K	0.50%	1/16W
R427	1-216-833-11	METAL CHIP	10K	5%	1/16W
R428	1-216-833-11	METAL CHIP	10K	5%	1/16W
R429	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R430	1-216-837-11	METAL CHIP	22K	5%	1/16W
R431	1-216-842-11	METAL CHIP	56K	5%	1/16W
R432	1-216-839-11	METAL CHIP	33K	5%	1/16W
R433	1-216-837-11	METAL CHIP	22K	5%	1/16W
R434	1-216-842-11	METAL CHIP	56K	5%	1/16W
R435	1-216-839-11	METAL CHIP	33K	5%	1/16W
R436	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R437	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R438	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R439	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R440	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R441	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R442	1-216-833-11	METAL CHIP	10K	5%	1/16W
R443	1-216-833-11	METAL CHIP	10K	5%	1/16W
R444	1-216-833-11	METAL CHIP	10K	5%	1/16W
R445	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R446	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R447	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R448	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R449	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R450	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R451	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R452	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (DSR-40)
R452	1-216-823-11	METAL CHIP	1.5K	5%	1/16W (DSR-40P)
R453	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R454	1-216-826-11	METAL CHIP	2.7K	5%	1/16W (DSR-40)
R454	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (DSR-40P)
R455	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R456	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R457	1-218-827-11	RES,CHIP	150	0.50%	1/16W

Ref. No.	Part No.	Description			Remark
R458	1-216-821-11	METAL CHIP	1K	5%	1/16W
R459	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R460	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R461	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R462	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R463	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R464	1-218-847-11	RES,CHIP	1K	0.50%	1/16W
R465	1-218-847-11	RES,CHIP	1K	0.50%	1/16W
R466	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R467	1-218-863-11	RES,CHIP	4.7K	0.50%	1/16W
R468	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R469	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R470	1-218-861-11	RES,CHIP	3.9K	0.50%	1/16W
R471	1-218-861-11	RES,CHIP	3.9K	0.50%	1/16W
R472	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R473	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R474	1-218-863-11	RES,CHIP	4.7K	0.50%	1/16W
R475	1-218-863-11	RES,CHIP	4.7K	0.50%	1/16W
R476	1-218-863-11	RES,CHIP	4.7K	0.50%	1/16W
R477	1-216-837-11	METAL CHIP	22K	5%	1/16W
R478	1-216-842-11	METAL CHIP	56K	5%	1/16W
R479	1-216-839-11	METAL CHIP	33K	5%	1/16W
R480	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R481	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R482	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R483	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R484	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R485	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R486	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R487	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R488	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R489	1-216-837-11	METAL CHIP	22K	5%	1/16W (DSR-40P)
R490	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R491	1-216-842-11	METAL CHIP	56K	5%	1/16W (DSR-40P)
R492	1-216-839-11	METAL CHIP	33K	5%	1/16W (DSR-40P)
R493	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R494	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R495	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R496	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R497	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R498	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R499	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R500	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R501	1-218-857-11	RES,CHIP	2.7K	0.50%	1/16W
R502	1-218-867-11	RES,CHIP	6.8K	0.50%	1/16W
R503	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (DSR-40P)
R504	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (DSR-40P)
R505	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R506	1-218-859-11	RES,CHIP	3.3K	0.50%	1/16W
R507	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R508	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R509	1-218-867-11	RES,CHIP	6.8K	0.50%	1/16W
R510	1-218-857-11	RES,CHIP	2.7K	0.50%	1/16W
R511	1-218-851-11	RES,CHIP	1.5K	0.50%	1/16W
R512	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R514	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R515	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R516	1-218-859-11	RES,CHIP	3.3K	0.50%	1/16W
R517	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R518	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R519	1-216-841-11	METAL CHIP	47K	5%	1/16W
R521	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R522	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R523	1-216-842-11	METAL CHIP	56K	5%	1/16W
R524	1-216-842-11	METAL CHIP	56K	5%	1/16W
R525	1-216-833-11	METAL CHIP	10K	5%	1/16W
R526	1-216-841-11	METAL CHIP	47K	5%	1/16W
R527	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R528	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R529	1-216-833-11	METAL CHIP	10K	5%	1/16W
R530	1-216-817-11	METAL CHIP	470	5%	1/16W
R531	1-216-842-11	METAL CHIP	56K	5%	1/16W
R532	1-216-833-11	METAL CHIP	10K	5%	1/16W
R533	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R534	1-216-847-11	METAL CHIP	150K	5%	1/16W
R535	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R536	1-216-818-11	METAL CHIP	560	5%	1/16W
R537	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R538	1-218-847-11	RES,CHIP	1K	0.50%	1/16W
R539	1-216-821-11	METAL CHIP	1K	5%	1/16W
R540	1-218-848-11	RES,CHIP	1.1K	0.50%	1/16W
R541	1-218-873-11	RES,CHIP	12K	0.50%	1/16W
R542	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R543	1-216-821-11	METAL CHIP	1K	5%	1/16W
R545	1-216-864-11	METAL CHIP	0	5%	1/16W
R546	1-216-864-11	METAL CHIP	0	5%	1/16W
R547	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R548	1-216-821-11	METAL CHIP	1K	5%	1/16W
R549	1-218-855-11	RES,CHIP	2.2K	0.50%	1/16W
R550	1-216-821-11	METAL CHIP	1K	5%	1/16W
R551	1-216-821-11	METAL CHIP	1K	5%	1/16W
R552	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R553	1-218-863-11	RES,CHIP	4.7K	0.50%	1/16W
R554	1-216-833-11	METAL CHIP	10K	5%	1/16W
R555	1-216-833-11	METAL CHIP	10K	5%	1/16W
R556	1-216-864-11	METAL CHIP	0	5%	1/16W
R557	1-216-864-11	METAL CHIP	0	5%	1/16W
R558	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R559	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R560	1-216-864-11	METAL CHIP	0	5%	1/16W
R561	1-216-864-11	METAL CHIP	0	5%	1/16W
R562	1-216-864-11	METAL CHIP	0	5%	1/16W
R563	1-216-821-11	METAL CHIP	1K	5%	1/16W
R564	1-216-833-11	METAL CHIP	10K	5%	1/16W
R566	1-216-821-11	METAL CHIP	1K	5%	1/16W
R567	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R568	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R569	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R570	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R571	1-216-833-11	METAL CHIP	10K	5%	1/16W
R572	1-216-833-11	METAL CHIP	10K	5%	1/16W
R573	1-216-833-11	METAL CHIP	10K	5%	1/16W
R574	1-216-842-11	METAL CHIP	56K	5%	1/16W
R575	1-216-839-11	METAL CHIP	33K	5%	1/16W
R576	1-216-844-11	METAL CHIP	82K	5%	1/16W
R577	1-216-839-11	METAL CHIP	33K	5%	1/16W

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Ref. No.	Part No.	Description			Remark
R578	1-216-842-11	METAL CHIP	56K	5%	1/16W
R579	1-216-840-11	METAL CHIP	39K	5%	1/16W (DSR-40)
R579	1-216-839-11	METAL CHIP	33K	5%	1/16W (DSR-40P)
R580	1-216-837-11	METAL CHIP	22K	5%	1/16W
R581	1-216-837-11	METAL CHIP	22K	5%	1/16W
R582	1-216-837-11	METAL CHIP	22K	5%	1/16W
R584	1-216-864-11	METAL CHIP	0	5%	1/16W
R585	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R586	1-218-863-11	RES,CHIP	4.7K	0.50%	1/16W
R591	1-218-831-11	METAL CHIP	220	0.50%	1/16W
R592	1-216-864-11	METAL CHIP	0	5%	1/16W
R601	1-216-841-11	METAL CHIP	47K	5%	1/16W
R602	1-216-841-11	METAL CHIP	47K	5%	1/16W
R603	1-216-813-11	METAL CHIP	220	5%	1/16W
R604	1-216-849-11	METAL CHIP	220K	5%	1/16W
R605	1-216-837-11	METAL CHIP	22K	5%	1/16W
R606	1-216-839-11	METAL CHIP	33K	5%	1/16W
R610	1-216-817-11	METAL CHIP	470	5%	1/16W
R611	1-216-816-11	METAL CHIP	390	5%	1/16W
R612	1-216-821-11	METAL CHIP	1K	5%	1/16W
R613	1-216-817-11	METAL CHIP	470	5%	1/16W
R616	1-216-821-11	METAL CHIP	1K	5%	1/16W
R619	1-216-815-11	METAL CHIP	330	5%	1/16W
R621	1-216-821-11	METAL CHIP	1K	5%	1/16W
R622	1-216-833-11	METAL CHIP	10K	5%	1/16W
R623	1-216-853-11	METAL CHIP	470K	5%	1/16W
R629	1-216-833-11	METAL CHIP	10K	5%	1/16W
R630	1-216-836-11	METAL CHIP	18K	5%	1/16W
R631	1-216-837-11	METAL CHIP	22K	5%	1/16W
R636	1-216-833-11	METAL CHIP	10K	5%	1/16W
R639	1-216-821-11	METAL CHIP	1K	5%	1/16W
R640	1-216-841-11	METAL CHIP	47K	5%	1/16W
R641	1-216-841-11	METAL CHIP	47K	5%	1/16W
R642	1-216-821-11	METAL CHIP	1K	5%	1/16W
R643	1-216-845-11	METAL CHIP	100K	5%	1/16W
R651	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R652	1-216-834-11	METAL CHIP	12K	5%	1/16W
R653	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R654	1-216-821-11	METAL CHIP	1K	5%	1/16W
R655	1-216-833-11	METAL CHIP	10K	5%	1/16W
R656	1-216-821-11	METAL CHIP	1K	5%	1/16W
R657	1-216-835-11	METAL CHIP	15K	5%	1/16W
R658	1-216-839-11	METAL CHIP	33K	5%	1/16W
R659	1-216-817-11	METAL CHIP	470	5%	1/16W
R660	1-216-864-11	METAL CHIP	0	5%	1/16W
R661	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R662	1-216-847-11	METAL CHIP	150K	5%	1/16W
R663	1-216-864-11	METAL CHIP	0	5%	1/16W
R664	1-216-818-11	METAL CHIP	560	5%	1/16W
R665	1-216-864-11	METAL CHIP	0	5%	1/16W
R666	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R667	1-218-831-11	RES,CHIP	220	0.50%	1/16W
R668	1-216-833-11	METAL CHIP	10K	5%	1/16W
R669	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R670	1-216-864-11	METAL CHIP	0	5%	1/16W
R671	1-216-864-11	METAL CHIP	0	5%	1/16W
R672	1-218-827-11	RES,CHIP	150	0.50%	1/16W
R673	1-216-864-11	METAL CHIP	0	5%	1/16W
R674	1-216-864-11	METAL CHIP	0	5%	1/16W
R675	1-216-864-11	METAL CHIP	0	5%	1/16W
R676	1-216-864-11	METAL CHIP	0	5%	1/16W
R677	1-216-833-11	METAL CHIP	10K	5%	1/16W
R678	1-216-833-11	METAL CHIP	10K	5%	1/16W
R852	1-216-864-11	METAL CHIP	0	5%	1/16W
R853	1-216-864-11	METAL CHIP	0	5%	1/16W
R854	1-216-864-11	METAL CHIP	0	5%	1/16W
R855	1-216-864-11	METAL CHIP	0	5%	1/16W
R856	1-216-864-11	METAL CHIP	0	5%	1/16W
R857	1-216-166-00	RES,CHIP	47	5%	1/8W
R858	1-216-166-00	RES,CHIP	47	5%	1/8W
R859	1-216-801-11	METAL CHIP	22	5%	1/16W
R860	1-216-841-11	METAL CHIP	47K	5%	1/16W
R861	1-216-864-11	METAL CHIP	0	5%	1/16W (DSR-40P)
R862	1-216-821-11	METAL CHIP	1K	5%	1/16W
R863	1-216-833-11	METAL CHIP	10K	5%	1/16W
R864	1-216-833-11	METAL CHIP	10K	5%	1/16W
R865	1-216-833-11	METAL CHIP	10K	5%	1/16W
R866	1-216-833-11	METAL CHIP	10K	5%	1/16W
R867	1-216-833-11	METAL CHIP	10K	5%	1/16W
R868	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R869	1-216-817-11	METAL CHIP	470	5%	1/16W
R870	1-216-817-11	METAL CHIP	470	5%	1/16W
R871	1-216-817-11	METAL CHIP	470	5%	1/16W
R872	1-216-817-11	METAL CHIP	470	5%	1/16W
R873	1-216-817-11	METAL CHIP	470	5%	1/16W
R874	1-216-864-11	METAL CHIP	0	5%	1/16W
R875	1-216-817-11	METAL CHIP	470	5%	1/16W
R876	1-216-817-11	METAL CHIP	470	5%	1/16W
R877	1-216-817-11	METAL CHIP	470	5%	1/16W
R878	1-216-817-11	METAL CHIP	470	5%	1/16W
R879	1-216-817-11	METAL CHIP	470	5%	1/16W
R880	1-216-817-11	METAL CHIP	470	5%	1/16W
R881	1-216-817-11	METAL CHIP	470	5%	1/16W
R882	1-216-817-11	METAL CHIP	470	5%	1/16W
R883	1-216-817-11	METAL CHIP	470	5%	1/16W
R884	1-216-817-11	METAL CHIP	470	5%	1/16W
R885	1-216-817-11	METAL CHIP	470	5%	1/16W
R886	1-216-817-11	METAL CHIP	470	5%	1/16W
R887	1-216-817-11	METAL CHIP	470	5%	1/16W
R888	1-216-817-11	METAL CHIP	470	5%	1/16W
R889	1-216-817-11	METAL CHIP	470	5%	1/16W
R890	1-216-817-11	METAL CHIP	470	5%	1/16W
R891	1-216-817-11	METAL CHIP	470	5%	1/16W
R892	1-216-817-11	METAL CHIP	470	5%	1/16W
R893	1-216-817-11	METAL CHIP	470	5%	1/16W
R894	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R895	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R897	1-216-817-11	METAL CHIP	470	5%	1/16W
R898	1-216-817-11	METAL CHIP	470	5%	1/16W
R899	1-216-833-11	METAL CHIP	10K	5%	1/16W
R900	1-216-817-11	METAL CHIP	470	5%	1/16W
R901	1-216-817-11	METAL CHIP	470	5%	1/16W
R902	1-216-864-11	METAL CHIP	0	5%	1/16W
R903	1-216-817-11	METAL CHIP	470	5%	1/16W
R904	1-216-864-11	METAL CHIP	0	5%	1/16W
R905	1-216-817-11	METAL CHIP	470	5%	1/16W
R906	1-216-833-11	METAL CHIP	10K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R907	1-216-864-11	METAL CHIP	0	5%	1/16W
R908	1-216-817-11	METAL CHIP	470	5%	1/16W
R909	1-216-833-11	METAL CHIP	10K	5%	1/16W
R910	1-216-833-11	METAL CHIP	10K	5%	1/16W
R911	1-216-864-11	METAL CHIP	0	5%	1/16W
R912	1-216-817-11	METAL CHIP	470	5%	1/16W
R913	1-216-833-11	METAL CHIP	10K	5%	1/16W
R914	1-216-833-11	METAL CHIP	10K	5%	1/16W
R915	1-216-864-11	METAL CHIP	0	5%	1/16W
R916	1-216-817-11	METAL CHIP	470	5%	1/16W
R917	1-216-833-11	METAL CHIP	10K	5%	1/16W
R918	1-216-833-11	METAL CHIP	10K	5%	1/16W
R919	1-216-864-11	METAL CHIP	0	5%	1/16W
R920	1-216-833-11	METAL CHIP	10K	5%	1/16W
R921	1-216-864-11	METAL CHIP	0	5%	1/16W
R922	1-216-833-11	METAL CHIP	10K	5%	1/16W
R923	1-216-864-11	METAL CHIP	0	5%	1/16W
R924	1-216-817-11	METAL CHIP	470	5%	1/16W
R925	1-216-817-11	METAL CHIP	470	5%	1/16W
R926	1-216-817-11	METAL CHIP	470	5%	1/16W
R927	1-216-817-11	METAL CHIP	470	5%	1/16W
R928	1-216-817-11	METAL CHIP	470	5%	1/16W
R929	1-216-817-11	METAL CHIP	470	5%	1/16W
R930	1-216-817-11	METAL CHIP	470	5%	1/16W
R931	1-216-817-11	METAL CHIP	470	5%	1/16W
R932	1-216-833-11	METAL CHIP	10K	5%	1/16W
R933	1-216-817-11	METAL CHIP	470	5%	1/16W
R934	1-216-817-11	METAL CHIP	470	5%	1/16W
R935	1-216-833-11	METAL CHIP	10K	5%	1/16W
R936	1-216-817-11	METAL CHIP	470	5%	1/16W
R937	1-216-817-11	METAL CHIP	470	5%	1/16W
R938	1-216-817-11	METAL CHIP	470	5%	1/16W
R939	1-216-841-11	METAL CHIP	47K	5%	1/16W
R941	1-216-845-11	METAL CHIP	100K	5%	1/16W
R942	1-216-845-11	METAL CHIP	100K	5%	1/16W
R943	1-216-817-11	METAL CHIP	470	5%	1/16W
R944	1-216-817-11	METAL CHIP	470	5%	1/16W
R945	1-216-817-11	METAL CHIP	470	5%	1/16W
R946	1-216-817-11	METAL CHIP	470	5%	1/16W
R947	1-216-817-11	METAL CHIP	470	5%	1/16W
R948	1-216-833-11	METAL CHIP	10K	5%	1/16W
R949	1-216-817-11	METAL CHIP	470	5%	1/16W
R950	1-216-817-11	METAL CHIP	470	5%	1/16W
R951	1-216-817-11	METAL CHIP	470	5%	1/16W
R952	1-216-841-11	METAL CHIP	47K	5%	1/16W
R953	1-216-841-11	METAL CHIP	47K	5%	1/16W
R954	1-216-841-11	METAL CHIP	47K	5%	1/16W
R955	1-216-841-11	METAL CHIP	47K	5%	1/16W
R956	1-216-841-11	METAL CHIP	47K	5%	1/16W
R957	1-216-841-11	METAL CHIP	47K	5%	1/16W
R958	1-216-833-11	METAL CHIP	10K	5%	1/16W
R959	1-216-833-11	METAL CHIP	10K	5%	1/16W
R960	1-216-833-11	METAL CHIP	10K	5%	1/16W
R962	1-216-154-00	RES,CHIP	15	5%	1/8W
R963	1-216-154-00	RES,CHIP	15	5%	1/8W
R964	1-219-570-11	RES,CHIP	10M	5%	1/16W
R965	1-216-817-11	METAL CHIP	470	5%	1/16W
R966	1-216-864-11	METAL CHIP	0	5%	1/16W
R967	1-216-864-11	METAL CHIP	0	5%	1/16W
R971	1-216-864-11	METAL CHIP	0	5%	1/16W
R972	1-216-864-11	METAL CHIP	0	5%	1/16W
R973	1-216-864-11	METAL CHIP	0	5%	1/16W
R974	1-216-864-11	METAL CHIP	0	5%	1/16W
R975	1-216-864-11	METAL CHIP	0	5%	1/16W
R976	1-216-864-11	METAL CHIP	0	5%	1/16W
R977	1-216-864-11	METAL CHIP	0	5%	1/16W
R980	1-216-844-11	METAL CHIP	82K	5%	1/16W
R981	1-216-864-11	METAL CHIP	0	5%	1/16W
R982	1-216-864-11	METAL CHIP	0	5%	1/16W
R983	1-216-837-11	METAL CHIP	22K	5%	1/16W
R984	1-216-821-11	METAL CHIP	1K	5%	1/16W
R985	1-216-833-11	METAL CHIP	10K	5%	1/16W
R987	1-216-844-11	METAL CHIP	82K	5%	1/16W
R988	1-216-853-11	METAL CHIP	470K	5%	1/16W
R989	1-216-805-11	METAL CHIP	47	5%	1/16W
R991	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R993	1-216-037-00	METAL CHIP	330	5%	1/10W
R994	1-216-833-11	METAL CHIP	10K	5%	1/16W
R995	1-216-833-11	METAL CHIP	10K	5%	1/16W
R996	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R998	1-216-801-11	METAL CHIP	22	5%	1/16W
R1017	1-216-817-11	METAL CHIP	470	5%	1/16W

< TEST PIN >

TP201	1-535-757-11	CHIP, CHECKER
TP202	1-535-757-11	CHIP, CHECKER
TP858	1-535-757-11	CHIP, CHECKER
TP859	1-535-757-11	CHIP, CHECKER

< VIBRATOR >

X201	1-579-738-21	VIBRATOR, CRYSTAL (14.31818MHz)(DSR-40)
X201	1-579-780-21	VIBRATOR, CRYSTAL (17.734475MHz) (DSR-40P)
X401	1-577-165-11	VIBLATOR, CERAMIC (500kHz)
X402	1-567-900-11	OSCILLATOR, CRYSTAL (14.31818MHz) (DSR-40)
X402	1-567-733-11	VIBRATOR, CRYSTAL (17.734475MHz) (DSR-40P)
X601	1-579-466-11	VIBRATOR, CRYSTAL (3.579545MHz)(DSR-40)
X601	1-579-661-21	OSCILLATOR, CRYSTAL (4.433619MHz) (DSR-40P)
X651	1-567-900-11	OSCILLATOR, CRYSTAL (14.31818MHz) (DSR-40)
X651	1-567-733-11	VIBRATOR, CRYSTAL (17.734475MHz) (DSR-40P)
X652	1-577-165-11	VIBLATOR, CERAMIC (500kHz)
X851	1-767-450-11	VIBRATOR, CERAMIC (20MHz)
X852	1-760-458-21	VIBRATOR, CRYSTAL (32.798kHz)
X853	1-760-458-21	VIBRATOR, CRYSTAL (32.798kHz)

MISCELLANEOUS
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55	1-790-556-11	CABLE, FLAT (FVH-5)
56	1-782-825-11	CABLE, FLAT (FVF-8)
57	1-782-824-11	CABLE, FLAT (FVJ-7)
60	1-959-583-11	HARNESS (VP-73)
62	1-790-557-11	CABLE, FLAT (FVR-12)
63	1-959-585-11	HARNESS (HR-62)
64	1-959-586-11	HARNESS (CR-111)

VA-106

Ref. No.	Part No.	Description	Remark
⚠66	1-958-585-11	HARNESS (AC-227)	
72	1-790-725-11	CABLE, FLAT (FVG-1)	
74	1-782-822-11	CABLE, FLAT (FVR-9)	
101	1-776-148-11	CABLE, FLAT (FCM-11) 15P	
102	1-776-145-11	CABLE, FLAT (FCM-8) 16P	
105	1-764-137-11	CONNECTOR, TRANSLATION 15P	
113	1-958-288-11	HARNESS (CM-130)	
114	1-776-151-11	CABLE, FLAT (FCM-12) 14P	
115	1-776-147-11	CABLE, FLAT (FCM-10) 15P	
116	1-776-146-11	CABLE, FLAT (FCM-9) 9P	
117	1-958-057-11	HARNESS (CP-79)	
118	1-958-061-11	HARNESS (VJ-103)	
119	1-958-058-11	HARNESS (JP-55)	
120	1-959-584-11	HARNESS (JH-51)	
121	1-543-793-11	FILTER, CLAMP (FERRITE CORE)	
755	A-7044-015-A	DRUM ASSY (DEH-08B-R)	
851	1-658-990-11	FP-406 FLEXIBLE BOARD	
CN901	1-770-312-21	CONNECTOR 4P	
M901	X-3944-897-2	FPC ASSY, MOTOR	
M902	8-835-545-01	MOTOR, DC SCD11A/J-N (CAPSTAN)	
M903	X-3945-784-1	MOTOR ASSY, LM (LOADING)	
M904	8-835-537-01	MOTOR, DC SRD11A/J-N (REEL)	
M905	1-698-534-31	FAN, DC	
S001	1-762-550-11	SWITCH, ROTARY (MODE)	
S901	1-762-551-11	SWITCH, PUSH (REC PROOF)	
S902	1-572-288-11	SWITCH, PUSH (C IN SW)	

****
HARDWARE LIST
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#1	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S
#2	7-682-552-09	SCREW +P 3X16
#3	7-682-547-09	SCREW +B 3X6
#4	7-685-132-19	SCREW +P 2.6X5 TYPE2 NON-SLIT
#6	7-628-253-20	SCREW +PS 2X6
#7	7-682-646-09	SCREW +PS 3X5
#8	7-628-253-00	SCREW +PS 2X4
#9	7-627-553-37	SCREW (M2X3), SPECIAL HEAD
#10	7-685-871-01	SCREW +BVTT 3X6 (S TIGHT)

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ACCESSORIES
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⚠	1-551-812-11	CORD, POWER (DSR-40)
⚠	1-782-929-11	CORD, POWER SUPPLY (BS 3P) (DSR-40P)
	3-865-349-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH)
	3-865-349-21	MANUAL, INSTRUCTION (GERMAN, ITALIAN) (DSR-40P)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.